The Nuernberger-Rettig
(aka “Universal”)
Type-Maker

History ❧ *Mechanics* ❧ *Future*

2016

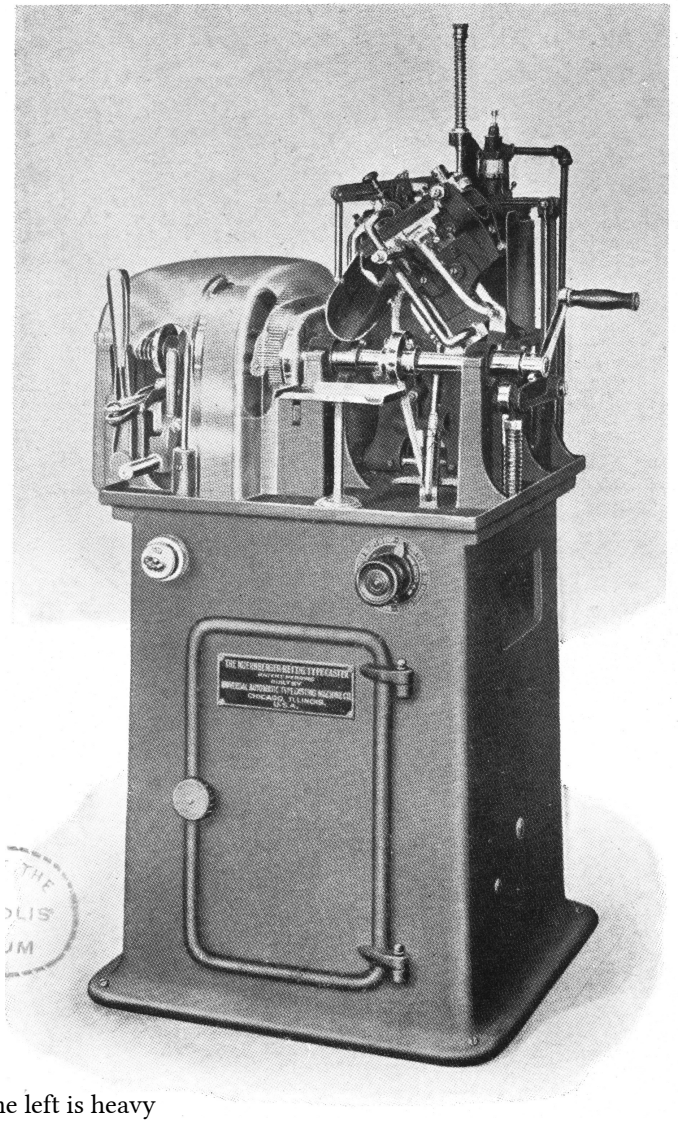
Dr. David M. MacMillan
Circuitous Root
Mineral Point, Wisconsin

Reassurance

Don't be alarmed by the excessive verbiage and detail in this presentation. I'll just cover the highlights now. If you're interested, you can read the fine print later - it will be online.

Abstract

The Nuernberger-Rettig (also called the “Universal”) type caster was one of several machines in the early 20th century which promised to make “Every Printer His Own Type Founder.” This presentation will discuss its history & limited success, its operating principles & some of its interesting mechanical features, and the survival of a few machines & rebuilding of one of them.



From Legros & Grant.
Note that the cover on the left is heavy cast iron - it is not transparent!

Acknowledgments

My thanks to all of you, and especially

Sky and Johanna Shipley
Patrick Goossens
Gregory Jackson Walters
R. Stanley Nelson
Mark Knudsen
Troy Groves
Victor Thibout

£ *In memoriam* David C. Churchman

Part 1: History

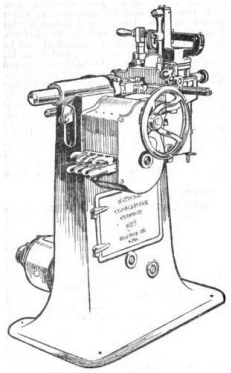
Why Did the N-R Come to Be?

- Collective Insanity

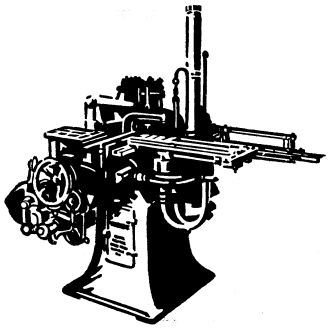
- Failed Unionism

“Every Printer His Own Type Founder”

Compositype (1899)



John E. Hanrahan,
principal type designer
for Ryan Type Foundry

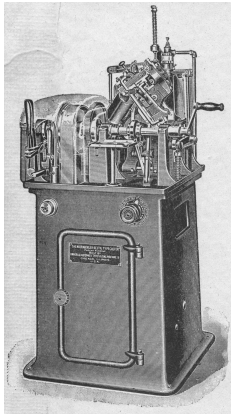


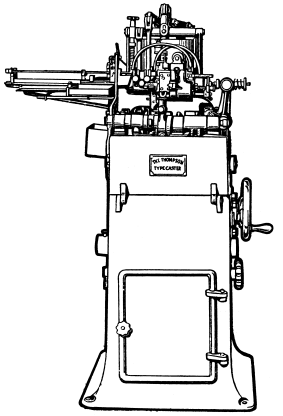
Nov. 24 1908.
Chalfant patent for
T&R Caster matrix
holder (filed 1907)

Monotype,
Sorts & Display Casting (1903)

1905 filings
of patents for
jet-breaking mold

N-R (1907)





Thompson (1907)

Initial focus on Linotype
matrices (John S. Thompson
published *Mechanism of the
Linotype* in 1902)

All were intended for the *printer* as end-user, not the type founder.

This phrase was never used by these companies themselves, but rather by type foundries in attacking them. The Keystone Type Foundry wrote of the “shameless business” and “wild schemes of certain machine builders” at the time the Thompson and Nuernberger-Rettig were introduced. See the “Keystone Insert” 1st issue (July 1907) & 2nd issue (Aug. 1907) in *The Printing Art*, v. 9. See also the 1910 ATF advertising later in this presentation.
I believe that it is a reference to the subtitle of Oliver Wendell Holmes’ popular 1858 essay collection, The *Autocrat of the Breakast Table*: Every Man his Own Boswell.

Type Casters You Could Buy: 1900-1910

USA

Schokmiller pivotals (Keystone, Western)
Compositype
Inland T.F. overseas sales
Monotype, sorts casting
Nuernberger-Rettig
Thompson

DE

Böttger, automatic (dates?)
Küstermann, System Foucher
also System Kisch & System Küstermann,
but unsure of dates for these
Schelter & Giesecke pivotals
possibly Stempel, not sure of dates

UK

Bannerman
Bhisotype (unsure if produced)
Legros & Grant Rapid Caster
Monotype, sorts casting
pivotals by Wood, Miles & Co.
pivotal "automatics" by Davis
pivotals by Williams Engineering (at the Nodis Works)
Nodis Rapid Caster

FR

Foucher automatics, duplex automatics

Other machines used but not for sale

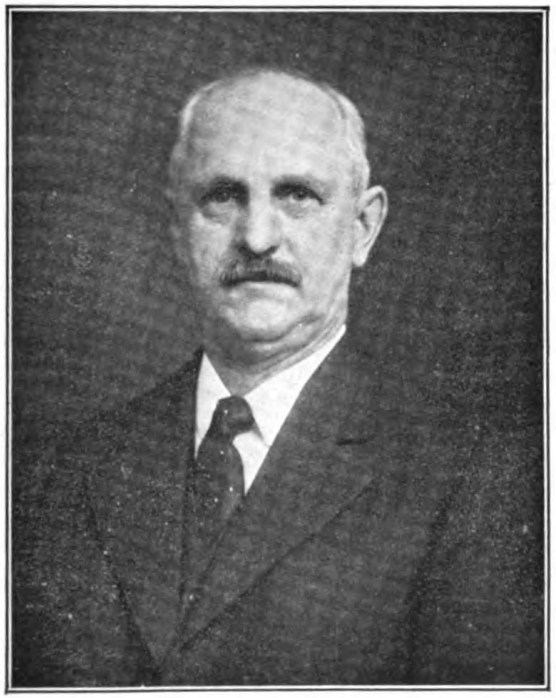
In-house pivotals, everywhere
Barth (ATF)
Inland T. F. in-house machines
Hardinge (1907, Advance T.F. 1912)
Ziegler (used for space & quad, MSJ & ATF)
P.M. Shanks (UK)

There may be some "ghosts"
in this list, but there are also
machines missing. In general,
there were more machines available
than we tend to remember.

Striking Developments

- There was only ever one typefounder's union (workers, not owners):
  The Typfounders' Trade District Union of the ITU
- It only ever held one strike, from 1903 to 1904
  At least: ATF, BB&S, Keystone, Lindsay
- It lost
- Philip G. Nuernberger was its President (also 5th VP, ITU (Chicago)),
  and primary negotiator with Robert W. Nelson of ATF
- At times George Rettig also Vice-President (Typefounders, Chicago)

Nuernberger and
Rettig were unlikely to
be made welcome as
employees after this.

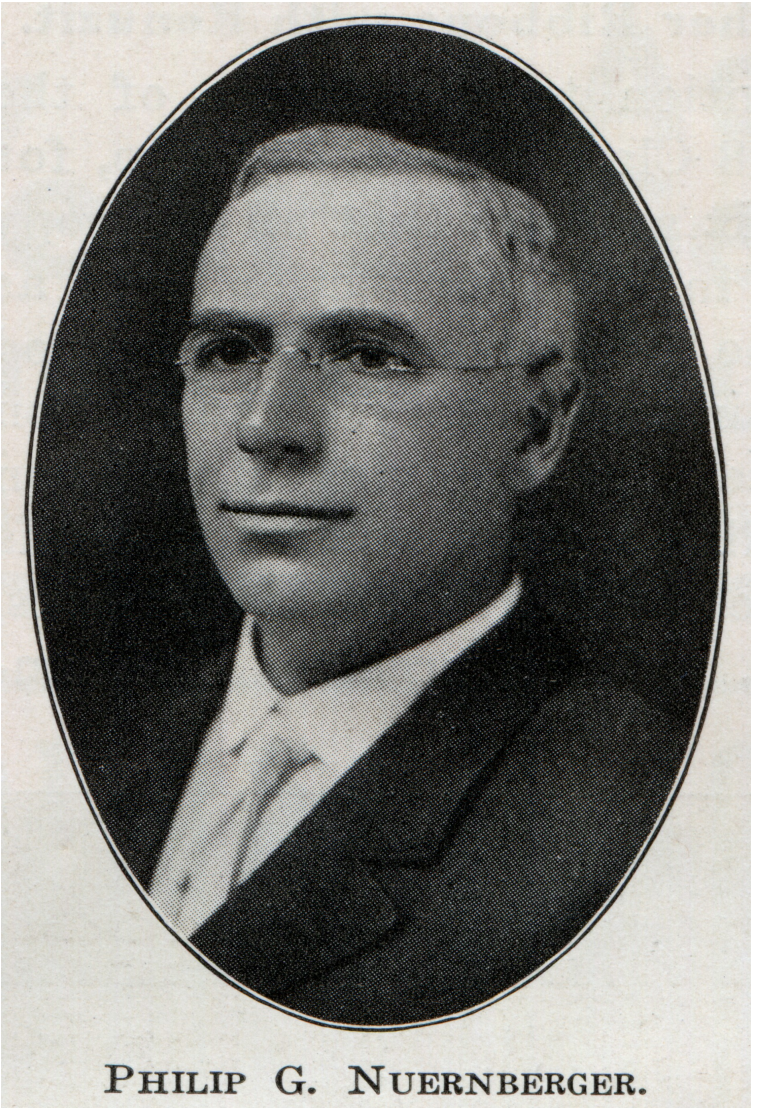


Robert W. Nelson
Walden's Stationer and Printer, v. 34, n. 14 (August 10, 1911): 33

"Reports of Officers and Proceedings of the Fiftieth Session of the International Typographical Union Held in Saint Louis, Missouri, August 8 to 13, 1904." Supplement to *The Typographical Journal*, Oct. 1904. pp. 17-19, 41-41.

Philip G. Nuernberger

Born 24 Sept. 1863 in “Heisen” [possibly Grand Dutchy of Hesse], now part of Germany
Emigrated to USA in 1865
Died 28 Oct. 1946 in Cook County, IL
Married twice: Amelia Laufer (1866-1905)
on 5 Mar. 1890
May Dunn (1880 - 1963)
on 25 Apr. 1906
~ 1900-1904 Active in the Typfounders' Trade District Union of the ITU
1901: Issued patent assigned to BB&S
1906: Described himself as a “Manufacturer”
1911: Vice-President of U A T M Co.
1916: Joined the Thompson Type Machine Co.
1940: Proprietor, Type Setting Machine Repair



PHILIP G. NUERNBERGER.

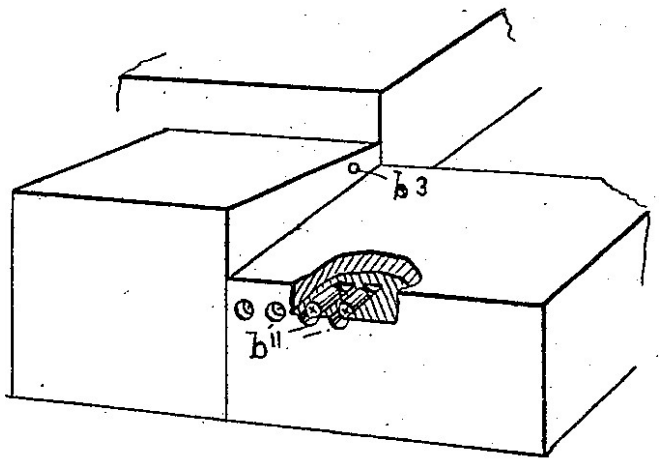
The Inland Printer, v. 56, n. 3 (Dec. 1915): 403.

Our other link to him:
In 1931, he wrote a long and detailed letter to Archie J. Little (Seattle) on the technology of matrix electroforming. Little was Paul Hayden Duensing's mentor, and PHD published this letter in 1966. Late 20th century enthusiasts' matrix making owes a lot to PGN.

George Rettig [Sr.]

Father of “our” George Rettig, Jr.

Born in Prussia in 1840
Came to US no later than 1874
Listed as a Type Founder in 1880 census
Patented an automatic jet-breaking type mold in 1885/6
    This anticipated the N-R jet / foot groove mold.
    Lawsuit by ATF against Farmer over this.
Patented a Type Rubbing Machine in 1886/7
    Assigned to Barnhart Brothers & Spindler
Died 1929, buried in Chicago



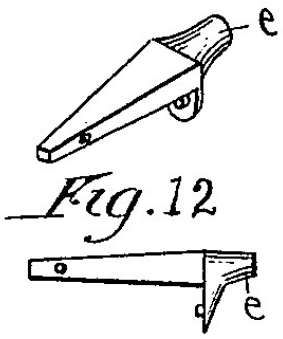
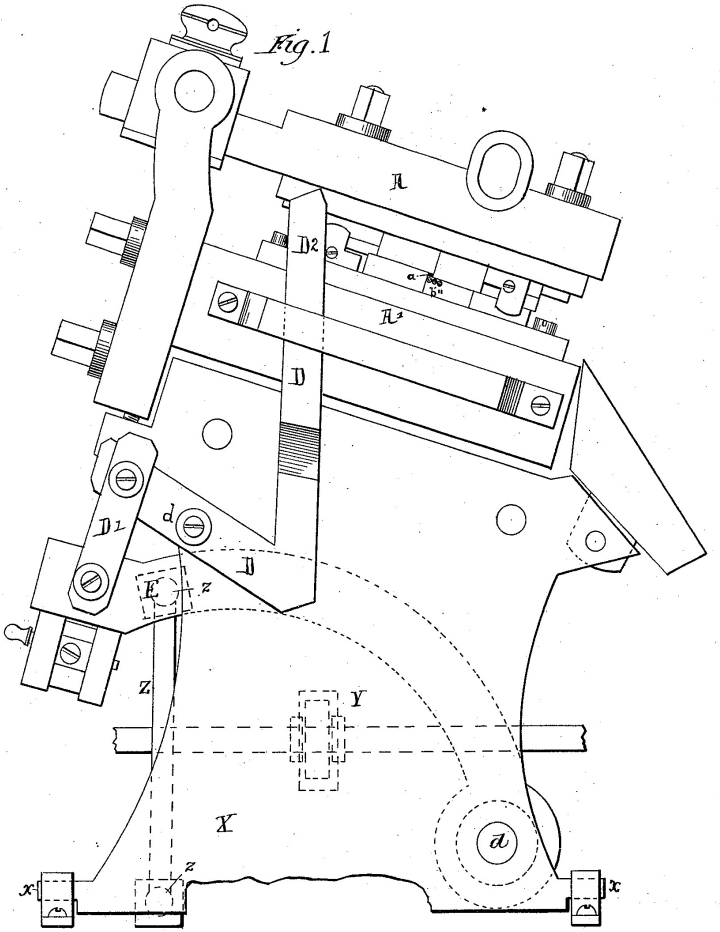


Fig. 12



Jet-breaking: US 354,935 issued 1886-12-28, not assigned.
Lawsuit: Nelson et. al. v. A. D. Farmer & Son T-F Co. *95 Fed 145*, No. 160 (1899)
Type-rubbing: US 370,819, issued 1887-10-04 & assigned to BB&S

George Rettig, Jr

Born Jan. 2, 1874, in Chicago
1900 Census gives his profession as Machinist
Single as of 1900 Census
Married Elizabeth Klarges by 1903/4
Two children: Dorothea Anita Rettig and George Rettig Jr. [3rd]
Active in the Typefounders' Trade District Union of the ITU (ca. 1904)
1910 Census gives his profession as Superintendent, Machine Shop
Secretary of the U A T M. Co. in 1911
Died 1913, buried in Hillside, IL (suburb of Chicago)

No patents other than those with PGN for the N-R caster
No known photograph

Company History

1904 Typefounders' strike broken
1905 April 22. Jet-breaking mold patent filed
1905 (June-Dec.) Business license filed/issued in Chicago as "The Universal Automatic Typecasting Machine Co."
1907 First ads for Nuernberger-Rettig Type-Casting Machine; trade announcements
Company at South Jefferson St., Chicago
1907 PGN travels to Europe with a machine
1910 Mergenthaler Linotype becomes a reseller of the Nuernberger-Rettig
1911 Listed as U A Typecasting M Co., Nuernberger VP & Rettig (Sec.) Sheldon St., Chicago,
in the *Chicago Printing Trades Blue Book* (Sheldon St. now has several other names)
1911 (Through August) Advertising the "Nuernberger-Rettig Type-Casting Machine" by the
U A Type-Casting M Co., 321 N. Sheldon St., Chicago (*The Inland Printer*, v. 47, n. 5 (Sept. 1911)
1911 By November, Mergenthaler Linotype had ceased reselling the N-R
1911 Sept. announcement that the "Universal Type Making Machine Co." has succeeded the Universal Automatic Type-Casting Machine Co. Addresses at Harrisburg, PA and Chicago.
(*The Inland Printer*, v. 47, n. 6 (Sept. 1911): [front advertising matter]
N.B. Later addresses in New York City, and references to a matrix library there.
1911 (Dec. 9) U T-M M Co. (321 N. Sheldon, Chicago) purchases matrix library and all rights from receiver
of the National Compositype Company.
1914 Trade notes in *The Inland Printer* still put them at 321 N. Sheldon, Chicago
By 1915 Nuernberger and another employee had left and joined TTMC
1921 Delaware charter revoked for 2 years of nonpayment of fees (so **company folded on or before 1919**)

Inconclusive & Contradictory Reports in the Trade Press
- 1911 Worcester, MA magazine suggests they moved there from Chicago
- 1918 NY Printing Trades Blue Book says they're on 8th Ave., NYC
- 1918 British source suggests that the U T-M M Co. purchased the TTMC (!)

Summary:	**1905 - 1911:**	**Expansion under initial ownership**	N-R by the UATMC
	1911	**Failure of their channel partner relationship w/MLC**	
	1911 - 1914:	**New ownership**	UT-M by the UTMMC
	1915 - 1919:	**Confused Decline**	1914: UT-C

Announcement 1907

THE NUERNBERGER-RETTIG TYPECASTING MACHINE.

The Nuernberger-Rettig typecasting machine, built by the Universal Automatic Typecasting Machine Company, at 22 South Jefferson street, Chicago, shown in the accompanying figure, is an improved hand or power casting machine, largely on the model of the regular typefoundry casting machine, which is in use to-day in many foundries and for many years was the only practical machine previous to the introduction of the automatic casting and dressing machines with which the large modern foundry is now fitted.

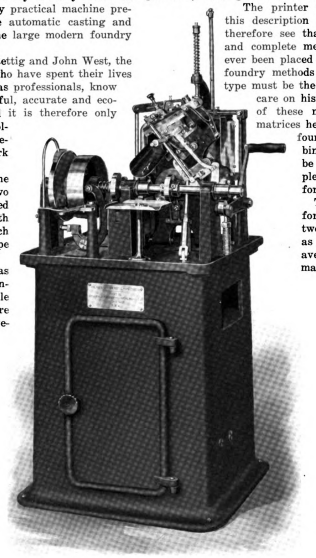
Phillip Nuernberger, George Rettig and John West, the operative partners, are all men who have spent their lives in the typefoundries and hence, as professionals, know what is required for the successful, accurate and economical production of type, and it is therefore only natural that they should have followed the lines laid down by experience in a lifetime of active work in type manufacture.

The illustration shows the machine, which occupies about two feet square of floor space, is fitted with a gas melting pot and with regular molds and matrices, such as have made the majority of type in this country.

The old casting machine was largely a development and it contained many things which, while not absolutely necessary, were adopted as economical conveniences in a typefoundry which was operating with molds of varying sizes and machines made anywhere from ten to fifteen years apart. These have all been discarded in the production of the present machine and strict attention has been given to producing a machine that will make solid type from six point to three-line pica with absolutely interchangeable molds and matrices of standard line and standard set. In doing this the mold block has been done away with and the mold is mounted directly on the vibrating plate, being held in position by two hollow steady pins, threaded on their interiors to receive the screws which hold the mold in position. It is the regular typefounder's mold, with the exception of a movable jet-piece, which is withdrawn by spring pressure as the mold leaves the pump and carries with it the jet, so that the type requires no breaking and no dressing to make it "type-high."

The nick is in the foot of the mold, as in ordinary foundry type, and the jet is broken from the upper portion of the curve, so that the feet are perfectly formed by the mold, and when the jet is broken away by the expansion of the spring the type drops out perfectly formed.

Matrices may be rented at $1 a day, and in such cases the time is computed from the time of delivery by the express company to the printing-office until the matrices have been delivered at the express office for return to the general office, a dated receipt being taken from the express company and showing in each instance how long the matrices have been held. Thus the printer is not charged with the matrices from the time they leave the general office, but only for the time during which they remain in his possession. Matrices may also be purchased and arrangements may be had to use matrices of other companies by making suitable holders to fit on the machine.



THE NUERNBERGER-RETTIG TYPECASTING MACHINE.

The printer who has followed closely this description of the arrangements will therefore see that this is the most direct and complete method of casting that has ever been placed within his reach, as exact foundry methods are followed and perfect type must be the result, with any ordinary care on his part. Indeed, with a few of these machines and a stock of matrices he would own his own typefoundry, as there is no rubbing, breaking or dressing to be done, the type falling complete from the machine ready for use as soon as it is cool.

The matrices will be sold for $25 per set of seventy-two, or they may be rented, as previously stated. The average product from the machine per hour is:

BODY.	WEIGHT.
6 point.....	4 pounds.
8 point.....	6 pounds.
10 point.....	8 pounds.
12 point.....10	pounds.
18 point.....12	pounds.
24 point.....12	pounds.
30 point.....14	pounds.
36 point.....14	pounds.

A much greater output than this has been secured in the shops of the company, but we do not give the extreme output, as the test was conducted by skilled experts, while the machine is designed for printers who have yet to become skilled in the casting business.

The operation is quite simple. The metal will be properly heated about three-quarters of an hour after lighting the gas. A thermometer in the pot shows when the metal has reached a casting temperature. With the mold set, the matrix in its proper place and the power turned on, the machine will then automatically turn out good type.

Molds have been changed — that is, a six-point mold taken off, matrix taken off and thirty-six point mold put on, and the thirty-six point matrix inserted and the first casting made — in one minute and thirty seconds, no adjusting of the pump or any part of the machine being necessary. This, of course, is expert work; but any printer, after becoming reasonably familiar with the machine, should be able to change from one size of type to another in three minutes.

Another important feature is that in each instance the

The Inland Printer, v. 39, n. 3 (June 1907): 419

Initial claims:

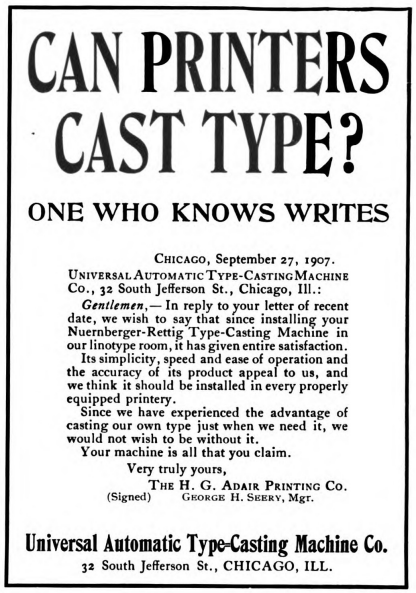
- 6 pt to 36 pt ("three line pica")
- Only N-R matrices
- ease of use <u>by printers</u>
- automatic jet breaking mold
- matrix rental or purchase
- 90 seconds to change a mold (!)

"... the production of his own type is robbed of its terrors and becomes a very attractive and economical proposition for the printer, ..."

Reference Accounts 1907/1908

Early N-R ads all involve reference accounts.
This is a high-tech but probably undercapitalized startup company -

reference accounts are vital.



CAN PRINTERS CAST TYPE?

ONE WHO KNOWS WRITES

CHICAGO, September 27, 1907.

UNIVERSAL AUTOMATIC TYPE-CASTING MACHINE Co., 32 South Jefferson St., Chicago, Ill.:

Gentlemen,— In reply to your letter of recent date, we wish to say that since installing your Nuernberger-Rettig Type-Casting Machine in our linotype room, it has given entire satisfaction.

Its simplicity, speed and ease of operation and the accuracy of its product appeal to us, and we think it should be installed in every properly equipped printery.

Since we have experienced the advantage of casting our own type just when we need it, we would not wish to be without it.

Your machine is all that you claim.

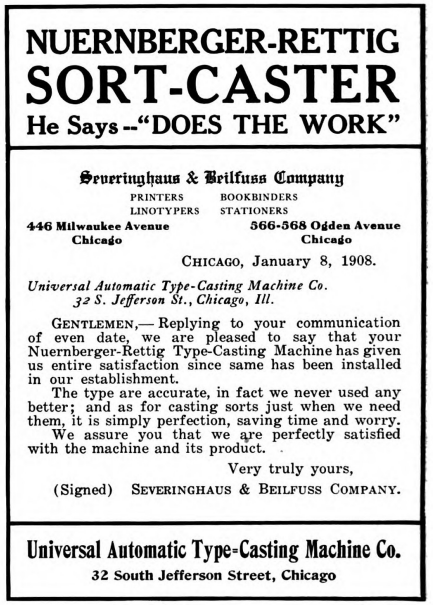
Very truly yours,

THE H. G. ADAIR PRINTING CO.

(Signed) GEORGE H. SEERY, Mgr.

Universal Automatic Type-Casting Machine Co.

32 South Jefferson St., CHICAGO, ILL.



NUERNBERGER-RETTIG SORT-CASTER

He Says --"DOES THE WORK"

Severinghaus & Beilfuss Company

PRINTERS BOOKBINDERS
LINOTYPERS STATIONERS

446 Milwaukee Avenue Chicago **366-368 Ogden Avenue Chicago**

CHICAGO, January 8, 1908.

Universal Automatic Type-Casting Machine Co.
32 S. Jefferson St., Chicago, Ill.

GENTLEMEN,— Replying to your communication of even date, we are pleased to say that your Nuernberger-Rettig Type-Casting Machine has given us entire satisfaction since same has been installed in our establishment.

The type are accurate, in fact we never used any better; and as for casting sorts just when we need them, it is simply perfection, saving time and worry.

We assure you that we are perfectly satisfied with the machine and its product.

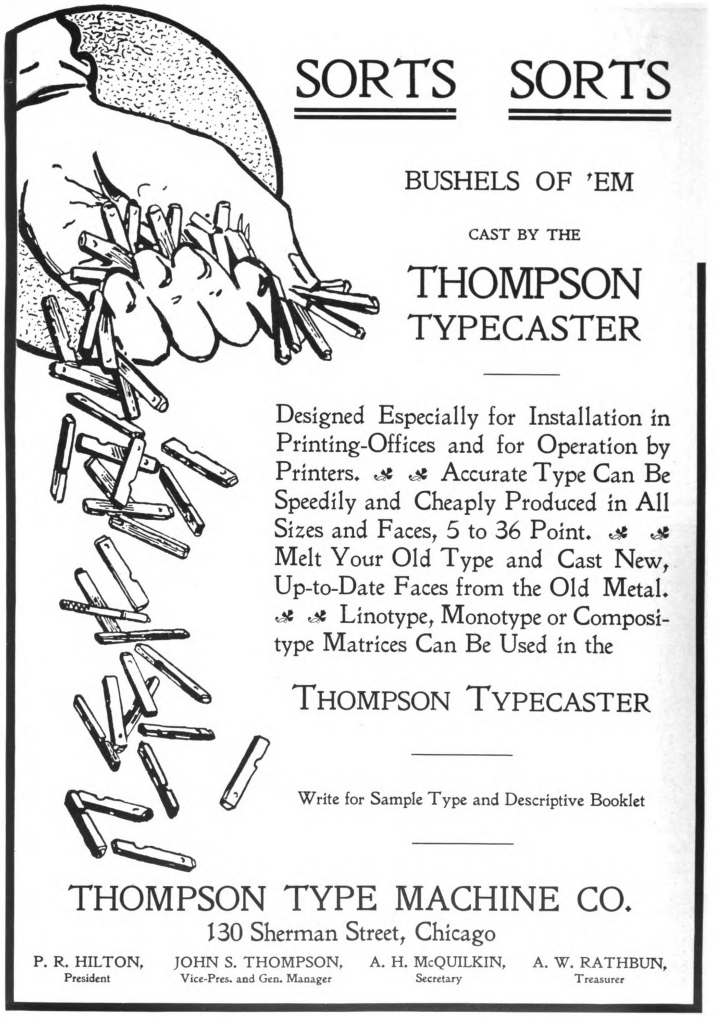
Very truly yours,

(Signed) SEVERINGHAUS & BEILFUSS COMPANY.

Universal Automatic Type-Casting Machine Co.

32 South Jefferson Street, Chicago

The Inland Printer, v. 40, n. 2 & 5 (Nov. 1908, Feb.1908): 292, 796)



SORTS SORTS

BUSHELS OF 'EM

CAST BY THE

THOMPSON TYPECASTER

Designed Especially for Installation in Printing-Offices and for Operation by Printers. Accurate Type Can Be Speedily and Cheaply Produced in All Sizes and Faces, 5 to 36 Point. Melt Your Old Type and Cast New, Up-to-Date Faces from the Old Metal. Linotype, Monotype or Composi-type Matrices Can Be Used in the

THOMPSON TYPECASTER

Write for Sample Type and Descriptive Booklet

THOMPSON TYPE MACHINE CO.

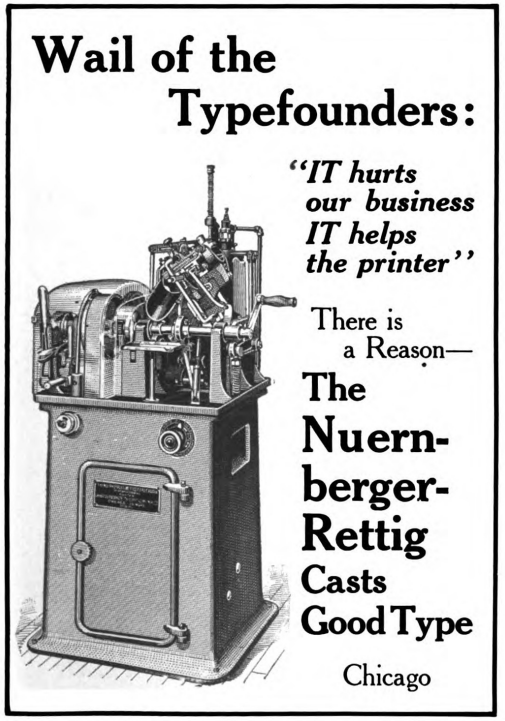
130 Sherman Street, Chicago

P. R. HILTON, President — JOHN S. THOMPSON, Vice-Pres. and Gen. Manager — A. H. McQUILKIN, Secretary — A. W. RATHBUN, Treasurer

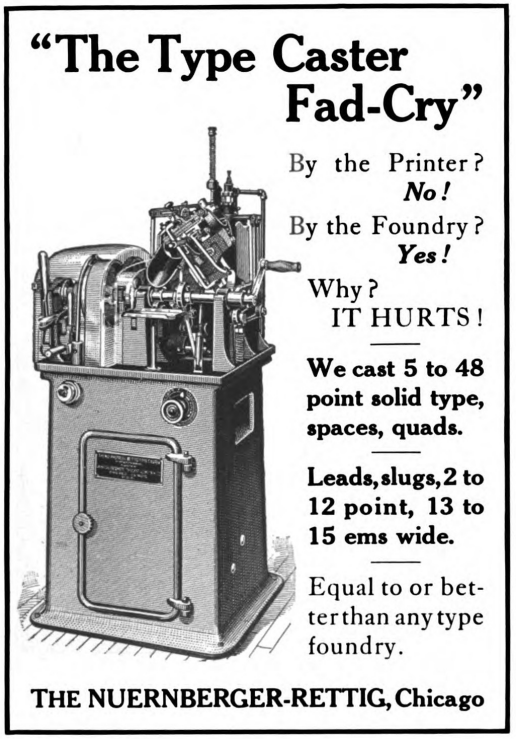
The Inland Printer, v. 40, n. 2 (Nov. 1908): 280)

While simultaneously, Thompson ads assumed success.

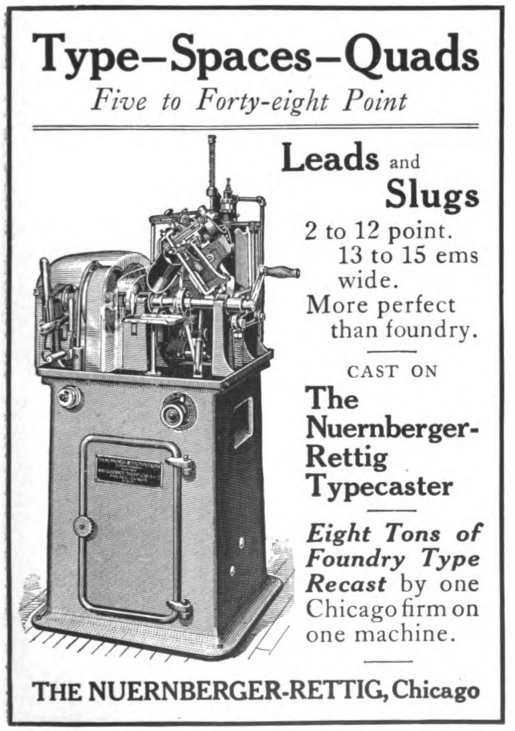
Aggressive Advertising 1909/1910



December



January

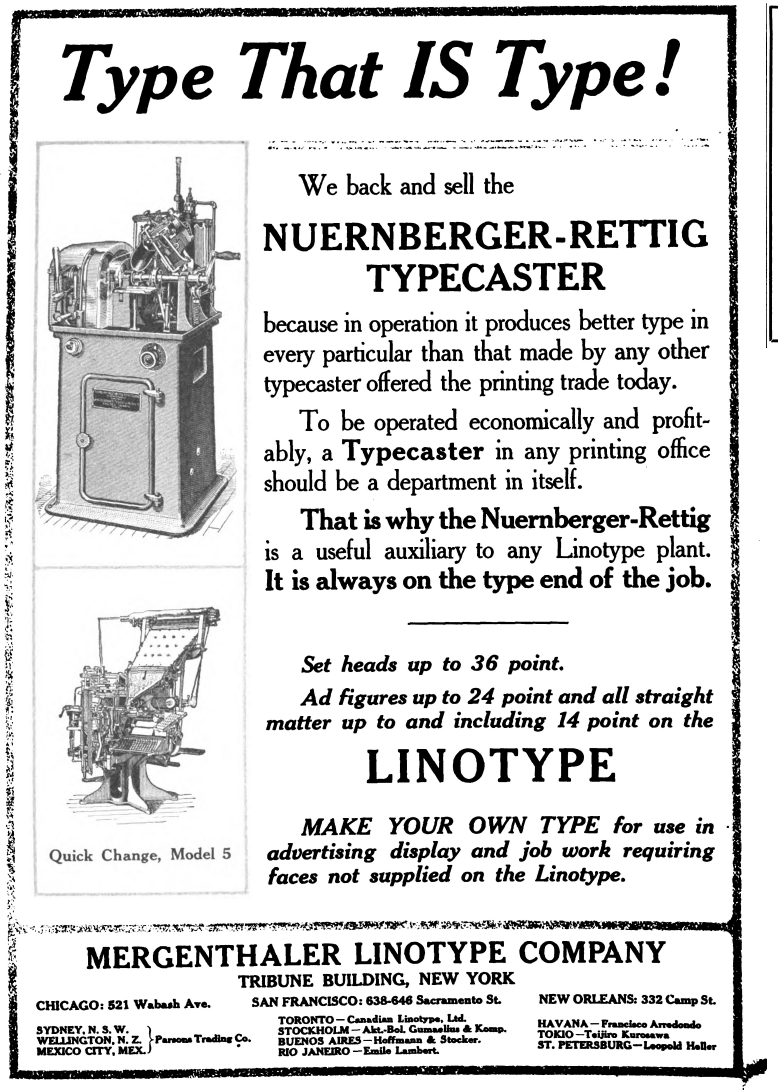


February

The Inland Printer, v. 44, n. 3, 4 & 5 (Dec. 1909, Jan. & Feb. 1910): 465, 607, 655

Note that they now claim 5 pt to 48 pt (vs. 6-36 originally, and 5-36 for the 1908 Thompson)

A Powerful Ally (for a while)



Type That IS Type!

Quick Change, Model 5

We back and sell the

NUERNBERGER-RETTIG TYPECASTER

because in operation it produces better type in every particular than that made by any other typecaster offered the printing trade today.

To be operated economically and profitably, a **Typecaster** in any printing office should be a department in itself.

That is why the Nuernberger-Rettig is a useful auxiliary to any Linotype plant. **It is always on the type end of the job.**

Set heads up to 36 point.

Ad figures up to 24 point and all straight matter up to and including 14 point on the

LINOTYPE

MAKE YOUR OWN TYPE for use in advertising display and job work requiring faces not supplied on the Linotype.

MERGENTHALER LINOTYPE COMPANY
TRIBUNE BUILDING, NEW YORK

CHICAGO: 521 Wabash Ave. SAN FRANCISCO: 638-646 Sacramento St. NEW ORLEANS: 332 Camp St.

SYDNEY, N. S. W. / WELLINGTON, N. Z. / MEXICO CITY, MEX. } Parsons Trading Co.
TORONTO—Canadian Linotype, Ltd.
STOCKHOLM—Akt.-Bol. Gumaelius & Komp.
BUENOS AIRES—Hoffmann & Stocker.
RIO JANEIRO—Emile Lambert.
HAVANA—Francisco Arredondo
TOKIO—Teijiro Kurosawa
ST. PETERSBURG—Leopold Heller

The Inland Printer, v. 44, n. 5 (Feb. 1910): 801

It's a Matter of Record

That newspapers using our Advertising Figure Equipment are cutting out overtime and saving fully 20 per cent. on composition of department store ads.

Its cost is trifling, and it can be be applied to any

LINOTYPE

We'll tell you all about it if you ask us

THROUGH MERIT ALONE
THE NUERNBERGER-RETTIG TYPECASTER
Is proving its value in the modern composing room
Sold on 30 days trial — YOU take no risk

MERGENTHALER LINOTYPE COMPANY
TRIBUNE BUILDING, NEW YORK
CHICAGO SAN FRANCISCO NEW ORLEANS TORONTO

Editor and Publisher, v. 9, n. 39, 41, 42 (Mar. 26, Apr. 9, 16 1910): 12, 12, 4

BOTH AT ONCE Heads and Body

NEWSPAPER DISPLAY HEADS 18 to 36 POINT

ROMAN AND BLACK FACE BODY TYPE 5 to 14 POINT

Direct from the Keyboard of **THE LINOTYPE**
ONE MAN—ONE MACHINE

THE BEST INDIVIDUAL TYPE Is Made by the
NUERNBERGER-RETTIG TYPECASTER
Any Make of Matrices Can Be Used

MERGENTHALER LINOTYPE COMPANY
TRIBUNE BUILDING, NEW YORK
CHICAGO SAN FRANCISCO NEW ORLEANS TORONTO

127 Quick Change Linotypes
35 Junior Linotypes
WERE ORDERED IN MARCH

"The Linotype Way Is the Only Way"

Quick Change Model 5 $3,150
Two Letter Junior $1,500
MAKE YOUR OWN DISPLAY TYPE

THE NUERNBERGER-RETTIG WAY
Makes the Best Type — Makes the Most Type — Makes the Cheapest Type

MERGENTHALER LINOTYPE COMPANY
TRIBUNE BUILDING, NEW YORK
CHICAGO SAN FRANCISCO NEW ORLEANS TORONTO

But in 1911 Linotype began reselling the Thompson

(Announcement in the *Linotype Bulletin*, v. 7, n. 11 (November 1911): 86)

The Empire Strikes Back

Every Printer His Own Type Founder as absurd as Every Business Man His Own Printer

For some months we have been demonstrating to the printer that for the sake of saving $300, or even $500 a year, he cannot afford to *spend twice that amount* in labor and other expenses, and *several times that amount* as a permanent investment in plant, to which he must add hundreds of matrices every year to become his own type founder.

The expenditure of between two and three thousand dollars for a casting machine and matrices, and the sure necessity of spending several hundred dollars *every year thereafter* for matrices and supplies, together with hundreds of dollars for labor and other expense, ought to be so self-evident to every printer as to cause him to turn down such an unnecessary and extravagant investment when his working capital can be used to so much better advantage in his printing business.

The *eloquent machine salesman* will demonstrate that a printer can produce seven or eight hundred dollars' worth of type which he might require during the year—although very few buy that much—and save thereby two or three hundred dollars, but he never figures for the prospective customer the actual cost of the labor, supplies, matrices, gas, interest, depreciation, overhead expenses, etc., and the inadequacy of the few hundred matrices which he at first supplies.

This Company has over four million matrices, and yet it cannot meet the requirements of many of its customers without constantly making new matrices.

As we produced last year over twenty thousand matrices, what will it cost a printer to keep up with the requirements of his business for casting his own type even to a limited extent?

Of course the *eloquent salesman* only figures the cost of metal, and the cost of labor when the machine is fully occupied eight or nine hours a day, and assumes the printer can keep his machine busy 300 days in the year.

612

When the Cost Committee of the International Cost Congress gets fairly into the minds of printers what overhead expense means, and what idle time means, those printers who have not considered those points will realize that their labor expense, their overhead expense, and all their actual expense of casting type amount to a good deal more every year than their entire annual purchases of type.

Besides, they will be limited to a few faces and a few sizes, whereas a far less expenditure of money will enable them to select at low prices large *weight fonts* from the American Type Founders Company of any of its present faces, and of the new ones continually coming out.

"The man with the casting machine" is handicapped at once in competition with other printers who are selecting faces from our four million matrices and the new designs we are continually originating.

What would a printer think of a suggestion, if made by one of his customers, that he should do his own printing because he has a few thousand letter heads and bill heads to print during the year, and can buy the paper and a press and get the work done at apparently considerable less than the printer charges? The printer would at once call his attention to the big overhead expense and idle time, the necessity for variety of equipment, etc.

It is a fallacy, therefore, for every printer to become his own type founder, just as it is for every business man to become his own printer.

There may be exceptions to such rules. There might be a printer who did an enormous quantity of work with one kind of type, who did not care if the type and typography were inferior and who could use a casting machine continuously for 300 days in a year, just as there are business men who can keep a compositor and a pressman busy all the time.

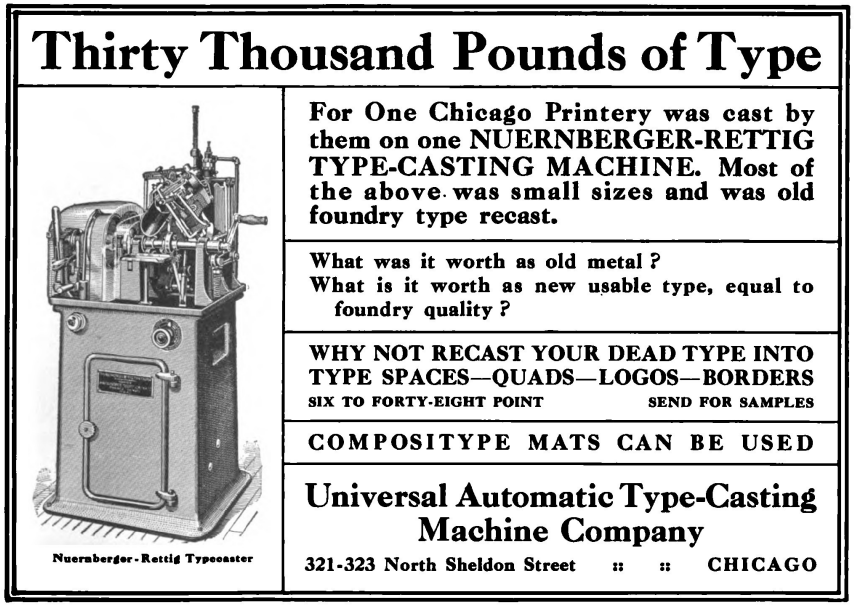
But, certainly, no first-class printer can afford to *burden himself with debt* and *continued expense* and also *tie himself down* to *limited faces and sizes* and *imperfect results* by being his own type founder.

American Type Founders Company

613

The Inland Printer, v. 44, n. 4 (Jan. 1910): 612-613

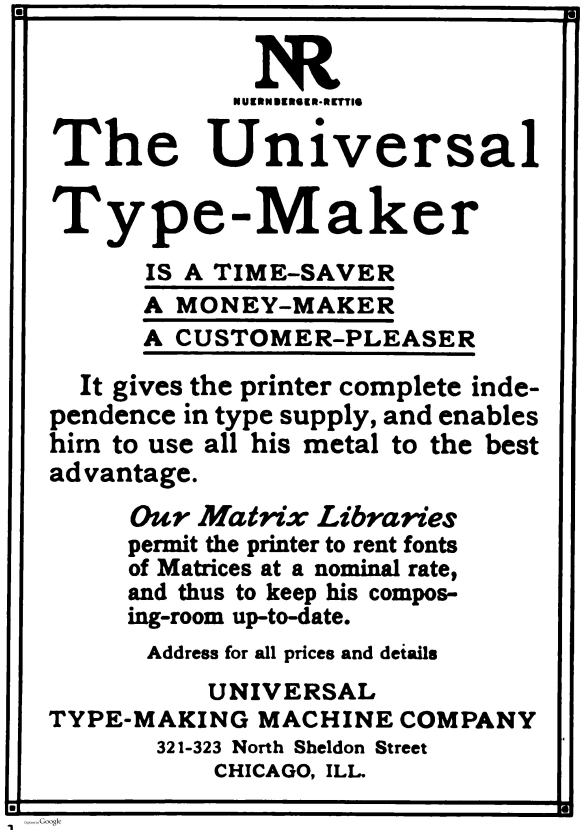
Advertising and Naming 1911/1912



The Inland Printer, v. 47, n. 2 (May 1911): 335

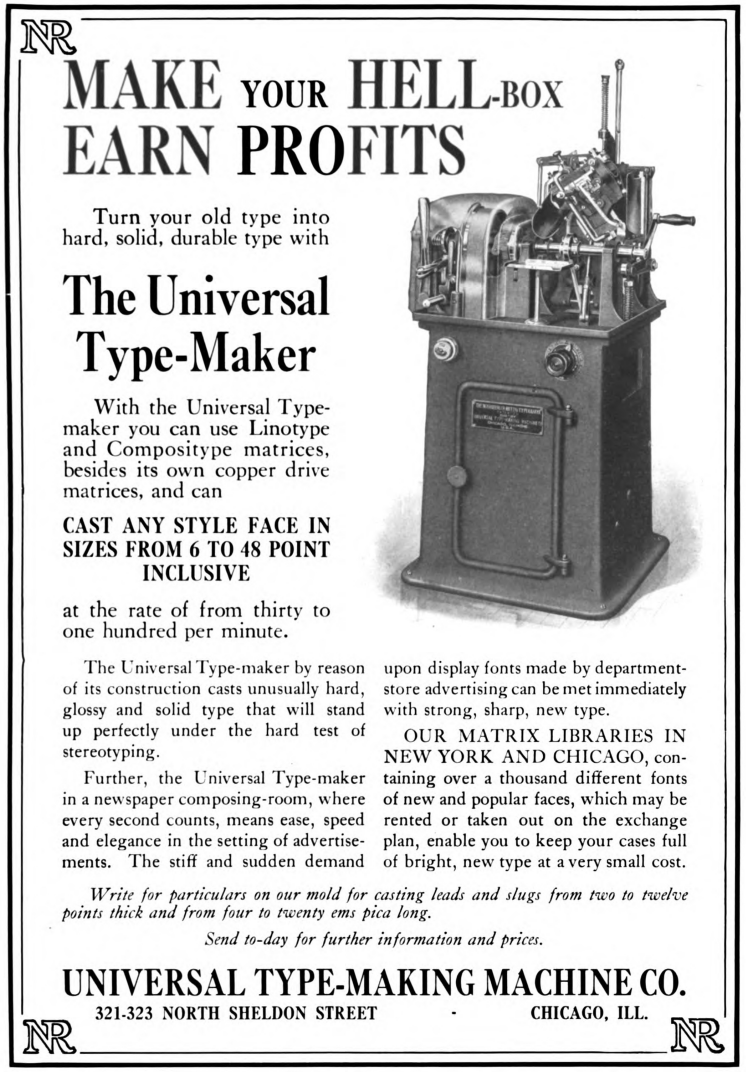
1911/1912 "Nuernberger-Rettig" to "Universal Type-Maker"

The Printing Art, v. 19, n. 1 (March 1912): 80



Advertising and Naming 1913

1913 “Universal Type-Maker”



NR

MAKE YOUR HELL-BOX EARN PROFITS

Turn your old type into hard, solid, durable type with

The Universal Type-Maker

With the Universal Type-maker you can use Linotype and Compositype matrices, besides its own copper drive matrices, and can

CAST ANY STYLE FACE IN SIZES FROM 6 TO 48 POINT INCLUSIVE

at the rate of from thirty to one hundred per minute.

The Universal Type-maker by reason of its construction casts unusually hard, glossy and solid type that will stand up perfectly under the hard test of stereotyping.

Further, the Universal Type-maker in a newspaper composing-room, where every second counts, means ease, speed and elegance in the setting of advertisements. The stiff and sudden demand upon display fonts made by department-store advertising can be met immediately with strong, sharp, new type.

OUR MATRIX LIBRARIES IN NEW YORK AND CHICAGO, containing over a thousand different fonts of new and popular faces, which may be rented or taken out on the exchange plan, enable you to keep your cases full of bright, new type at a very small cost.

Write for particulars on our mold for casting leads and slugs from two to twelve points thick and from four to twenty ems pica long.

Send to-day for further information and prices.

UNIVERSAL TYPE-MAKING MACHINE CO.

321-323 NORTH SHELDON STREET - CHICAGO, ILL.

NR NR

793

The Inland Printer, v. 51, n. 5 (Aug. 1913): 793

Advertising and Naming 1914

1914 "Universal Type-Caster"

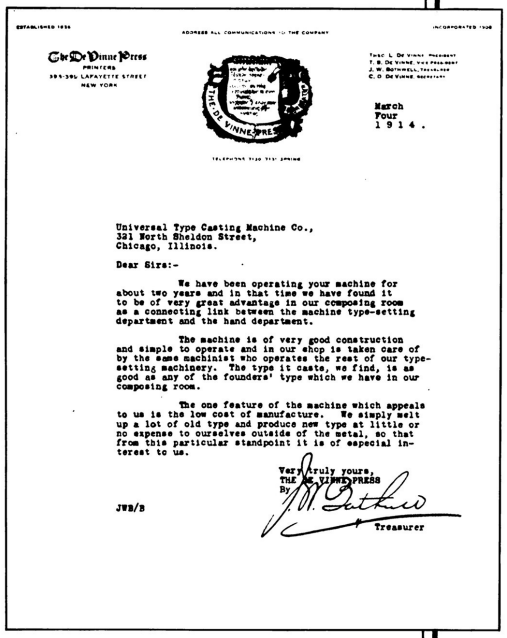
The Universal Type Caster

is sold on its merits as the best type-casting machine on the market

NO false or misleading statements are made regarding the quality of the type it produces, its simplicity of operation, its low maintenance cost, or, most important of all, *its matrix equipment.*

You should not accept what others say about the matrix assortment of the Universal Type Caster. A two-cent stamp will bring a copy of the new specimen book of Universal type faces—a handsome cloth-bound volume of 200 pages, showing nearly a thousand different fonts. Examine this book and then determine for yourself if the matrix equipment of the Universal Type Caster is not ample for the needs of your composing room.

Remember, the type faces shown in this specimen book are not "in preparation," but at our matrix libraries in Chicago and New York they are all for rental *exclusively to Universal users.*



The De Vinne Press
PRINTERS
399-401 LAFAYETTE STREET
NEW YORK

ADDRESS ALL COMMUNICATIONS TO THE COMPANY

INCORPORATED 1908

THE DE VINNE PRESS

March Four 1914.

Universal Type Casting Machine Co.,
321 North Sheldon Street,
Chicago, Illinois.

Dear Sirs:-

We have been operating your machine for about two years and in that time we have found it to be of very great advantage in our composing room as a connecting link between the machine type-setting department and the hand department.

The machine is of very good construction and simple to operate and in our shop is taken care of by the same machinist who operates the rest of our type-setting machinery. The type it casts, we find, is as good as any of the founders' type which we have in our composing room.

The one feature of the machine which appeals to us is the low cost of manufacture. We simply melt up a lot of old type and produce new type at little or no expense to ourselves outside of the metal, so that from this particular standpoint it is of especial interest to us.

Very truly yours,
THE DE VINNE PRESS
By M. Sutherland
Treasurer

JWB/B

¶ We are proud of the endorsements the Universal Type Caster has received from some of America's leading printers and newspaper publishers. Among these there is none we value higher than the one reproduced above from The De Vinne Press, of New York. Let us send you an equally strong endorsement of the machine from a firm in your vicinity. That the Universal Type Caster is giving satisfaction wherever it is installed is the reason why you should consider installing it in your composing room.

UNIVERSAL TYPE-MAKING MACHINE CO.
321 NORTH SHELDON STREET, CHICAGO

THIS ADVERTISEMENT IS PRINTED FROM AN ELECTROTYPE MADE FROM TYPE CAST ON A UNIVERSAL TYPE CASTER BY THE BECK ENGRAVING COMPANY OF PHILADELPHIA

[249]

A Complete Type Foundry in Your Composing Room at a Price You Can Afford

STUDY the equipment we offer with the Universal Type Caster and consider the reasonable price at which the machine and this equipment is sold. Compare this price and this equipment, and the type made by the Universal Type Caster, with any other type caster on the market.

Then let us send you a list of the prominent printers throughout the country who have installed the Universal Type Caster. You will be interested in what these printers say of its money-making and labor-saving advantages, especially the perfect type it produces.

Apply what these printers say about the Universal Type Caster to your own composing-room. Think what it would mean to always have your cases full of new, perfect type—not soft, spongy stuff that can only be used on cheap work, but type the type-foundries admit is as good as anything they can produce.

Think of the time saved if your compositors never stopped to distribute type or pick live jobs for sorts, but could keep continually busy on productive work.

Think of the time saved in your press-room if every form was set in brand new, perfect type—no time lost in making ready or changing damaged letters.

Think of the convenience of having right in your own composing-room a machine that will supply you with any amount of type you desire in all sizes from 5½- to 48-point and from nearly a thousand different fonts.

Think of the improvement in the quality of your work if every job was set in new type—clear, sharp, perfect, with solid bodies, and accurate to every dimension.

Think what a strong argument it would be with customers if you could tell them their work would always be set in brand new, perfect type? What stronger inducement could there be for a better price? Think of the money you would save by eliminating your type foundry bills. In many offices this saving alone will pay for the machine in a short time.

The Price of the Universal Type Caster With full equipment is $1350

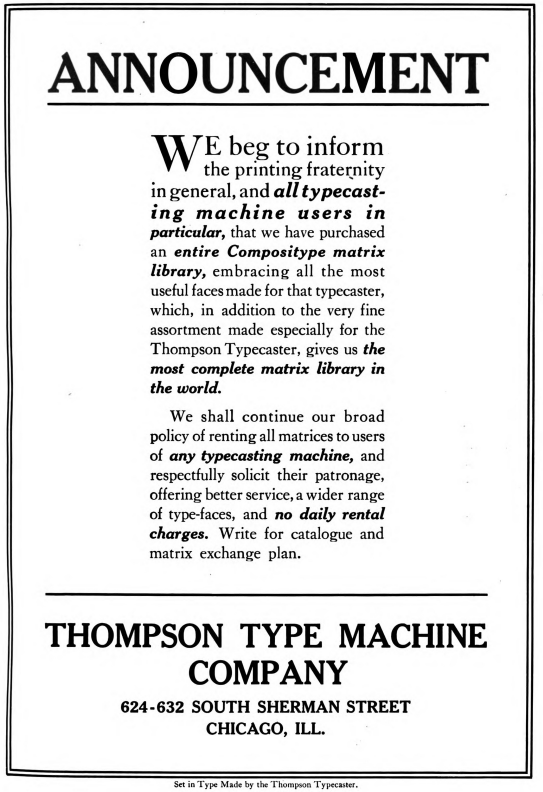
The price is the total price f.o.b. Chicago, and includes the complete machine, matrix holder for either Linotype or Universal matrices, and an equipment of molds for casting type, spaces and quads in any six sizes from 5½- to 48-point. Extra molds can be purchased at small cost or rented at nominal rates.

The foregoing are only a few of the reasons why you should investigate the Universal Type Caster. Let us send you samples of the type cast by the machine under the same conditions that would obtain in your composing-room, together with illustrated literature describing the machine in detail.

Universal Type-Making Machine Company
321 North Sheldon Street, Chicago

Compositype Kerfuffle

Compositype was co-founded by John E. Hanrahan, principal type designer for the Ryan Type Foundry (Baltimore), which had been a part of ATF since 1892 (Foundry H).



ANNOUNCEMENT

WE beg to inform the printing fraternity in general, and ***all typecasting machine users in particular,*** that we have purchased an ***entire Compositype matrix library,*** embracing all the most useful faces made for that typecaster, which, in addition to the very fine assortment made especially for the Thompson Typecaster, gives us ***the most complete matrix library in the world.***

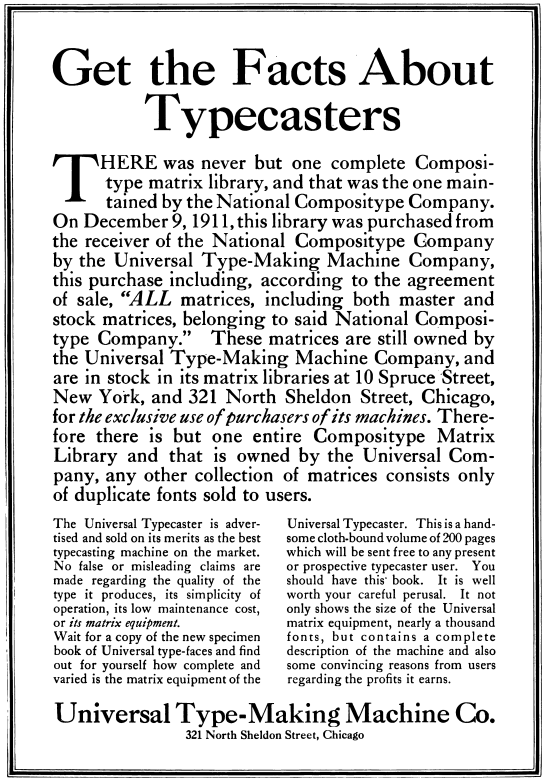
We shall continue our broad policy of renting all matrices to users of ***any typecasting machine,*** and respectfully solicit their patronage, offering better service, a wider range of type-faces, and ***no daily rental charges.*** Write for catalogue and matrix exchange plan.

THOMPSON TYPE MACHINE COMPANY

624-632 SOUTH SHERMAN STREET
CHICAGO, ILL.

Set in Type Made by the Thompson Typecaster.

The Inland Printer, v. 53, n. 1 (Apr. 1914): 141



Get the Facts About Typecasters

THERE was never but one complete Compositype matrix library, and that was the one maintained by the National Compositype Company. On December 9, 1911, this library was purchased from the receiver of the National Compositype Company by the Universal Type-Making Machine Company, this purchase including, according to the agreement of sale, *"ALL* matrices, including both master and stock matrices, belonging to said National Compositype Company." These matrices are still owned by the Universal Type-Making Machine Company, and are in stock in its matrix libraries at 10 Spruce Street, New York, and 321 North Sheldon Street, Chicago, for *the exclusive use of purchasers of its machines.* Therefore there is but one entire Compositype Matrix Library and that is owned by the Universal Company, any other collection of matrices consists only of duplicate fonts sold to users.

The Universal Typecaster is advertised and sold on its merits as the best typecasting machine on the market. No false or misleading claims are made regarding the quality of the type it produces, its simplicity of operation, its low maintenance cost, or *its matrix equipment.*
Wait for a copy of the new specimen book of Universal type-faces and find out for yourself how complete and varied is the matrix equipment of the Universal Typecaster. This is a handsome cloth-bound volume of 200 pages which will be sent free to any present or prospective typecaster user. You should have this book. It is well worth your careful perusal. It not only shows the size of the Universal matrix equipment, nearly a thousand fonts, but contains a complete description of the machine and also some convincing reasons from users regarding the profits it earns.

Universal Type-Making Machine Co.
321 North Sheldon Street, Chicago

307

The Inland Printer, v. 53, n. 2 (May. 1914): 307

In April 1914 the Thompson TMC advertised the acquisition of
"an entire Compositype matrix library"
giving them
"the most complete matrix library in the world" -
to be made available for rent to all.

The Universal T-MMC was quick to respond, asserting their IP rights - they'd purchased the Compositype matrix library from the receiver in 1911.

Range of Types Offered, circa 1914

Display faces to 48pt

SERIES No. 704

48 Point — Per Font, $30 net

USEFUL
Type Caster

SERIES No. 44

36 Point — Per Font, $30 net

COMMANDS
Quick Attention

Gothics

SERIES No. 1520

14 Point — Per Font, $20 net

UNIVERSAL TYPE-MAKER
IS COMPACT. COMPLETE, AND
MOST WONDERFUL

(Illustrations not to scale, obviously)

Body faces

SERIES No. 1121

12 Point — Per Font, $35 net

THE UNIVERSAL TYPE-MAKER is an original conception, created and adapted to cover an entirely new field of usefulness in the art of printing. Its purpose is to supply printers with facilities which will enable them to *make their own type*—both body and job faces, spaces, quads, borders, leaders,

abcdefghijklmnopqrstuvwxyzſtćtæœ
ABCDEFGHIJKLMNOPQRSTUVWXYZ&
ABCDEFGHIJKLMNOPQRSTUVWXYZ&
$1234567890

Typewriter faces

SERIES No. 2139

10 Point — Per Font, $30 net

To the Printer:

Imitation typewritten letters are profitable to the job printer. They can be turned out as fast as any job press will run. Your customers

Outline faces

SERIES No. 1027

36 Point — Per Font, $30 net

CRESCENTS
Neat Sloping Type

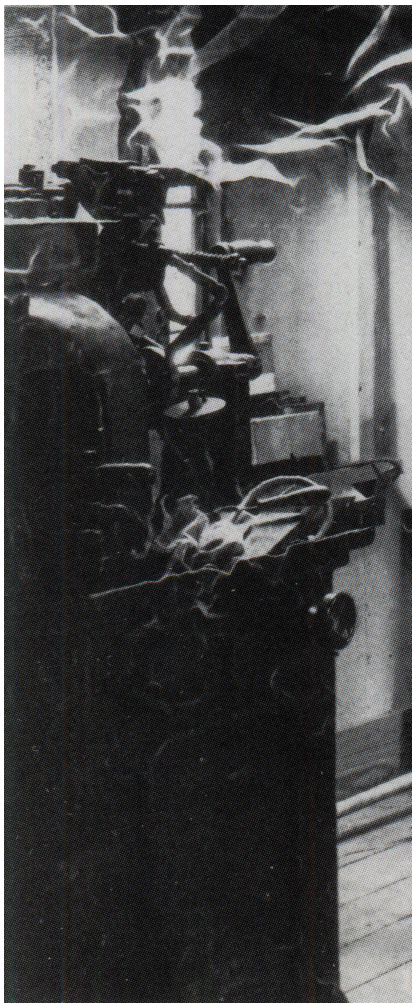
Borders & Ornaments

18 Point, No. 5 — 2 Matrices

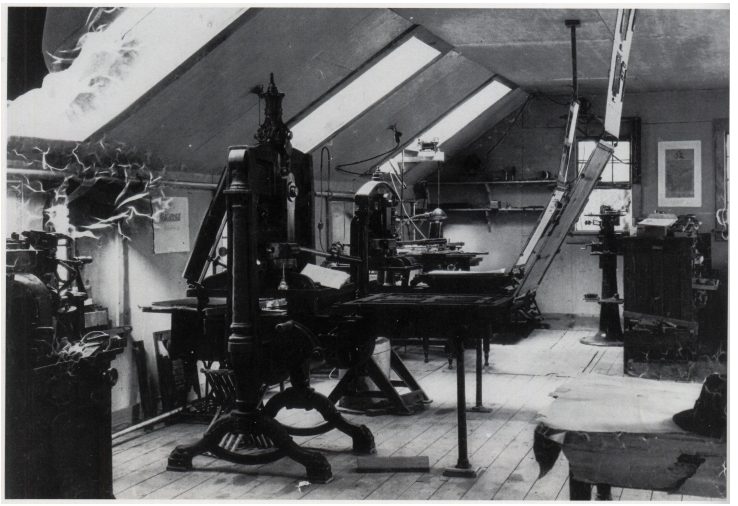
A new UT-MMC specimen book was announced in the *Inland Printer*, v53, n. 4 (July 1914): 610. It was probably the one now at Skyline Type Foundry (ex-Ludlow, ex-DCC/Sterling), from which these examples are taken.

(Almost) Famous N-Rs

Goudy Had One

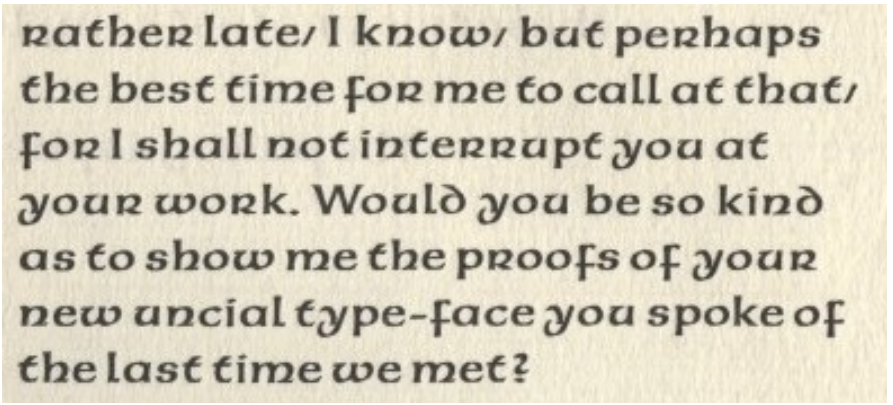


Photograph from the Library of Congress,
as shown in Bruckner, D. J. R., *Frederic Goudy*
(NY: Harry N. Abrams, 1990): 62



Deepdene before the fire. We do not know if he cast on it (it's on the wrong floor).

Victor Hammer's American Uncial



First size cast on an N-R at the Dearborn Type Foundry (Chicago)

Information from R. Hunter Middleton's *Victor Hammer: Artist and Master of the Printing Art*
[*The Printing Salesman's Herald,* No. 14] (Chicago: Champion Papers, 1965).
Text from Victor Hammer's *A Dialogue on the Uncial Between a Paleographer and a Printer*
(Chicago: Society of Typographic Arts, 1946). Scanned by the Univ. of Illinois at Chicago.

Sterling Type Foundry

Ex-Sterling N-R matrix (DeSoto logo),
now at Skyline T.F.
Sterling No. 9421,
Cast sideways:

To machine:	72pt body, 24pt set
To printer:	24pt body, 72pt set

Sterling T. F. specimen from
Ollie McLaughlin era
(Vermontville, MI)

Part 2: Mechanics

N-R Technology

The Nuernberger-Rettig is a pivotal type caster
with an entirely conventional pivotal casting mechanism.

It adds

A transmission, with an intermittent motion (stop motion) for casting large type under power.

Patent molds (if so equipped) which cast the jet break within the foot groove of the type. These break the jet during type delivery and eliminated the need to plow a foot groove.

Water cooling

It does not add

Any mechanism for dressing the type.

Any mechanism for setting up the delivered type on a stick.

N-R Capacities

Type, spaces, quads

- original announcement: 6pt to 36pt
- advertising by 1910: 5 pt to 48 pt
  (only a few series in 1914-era specimen > 36pt)
- ex-Sterling machines: up to 72 pt
- Nothing > 48pt in the literature,
  but 60 & 72 pt "U.A.T-C.M.Co." (pre-Sept. 1911) molds exist

Quotation Quads

- 1 1/2 x 2 up to 4 x 4 ems pica

Leads and Slugs

- 2 to 12 pt thick, 4 to 20 picas long

Styles of matrices

- N-R "foundry style" mats [TO DO: measure drive(s)]
- Compositype mats (flat mats, 0.043 drive)
- Mergenthaler Linotype & compatible mats
- Lanston display mats not mentioned in N-R literature

1."COMP" on an N-R mold means "Compositype," not "composition."
2. The Compositype mat holder could handle "similarly shaped" mats.
   This may have been code for "Lanston"; not sure if they made 0.050 molds.
3. ex-Sterling molds exist marked "48APL", "48G", "60G" & "72G" - are these for A-P-L and Giant Caster mats?

What is a Pivotal Type Caster?

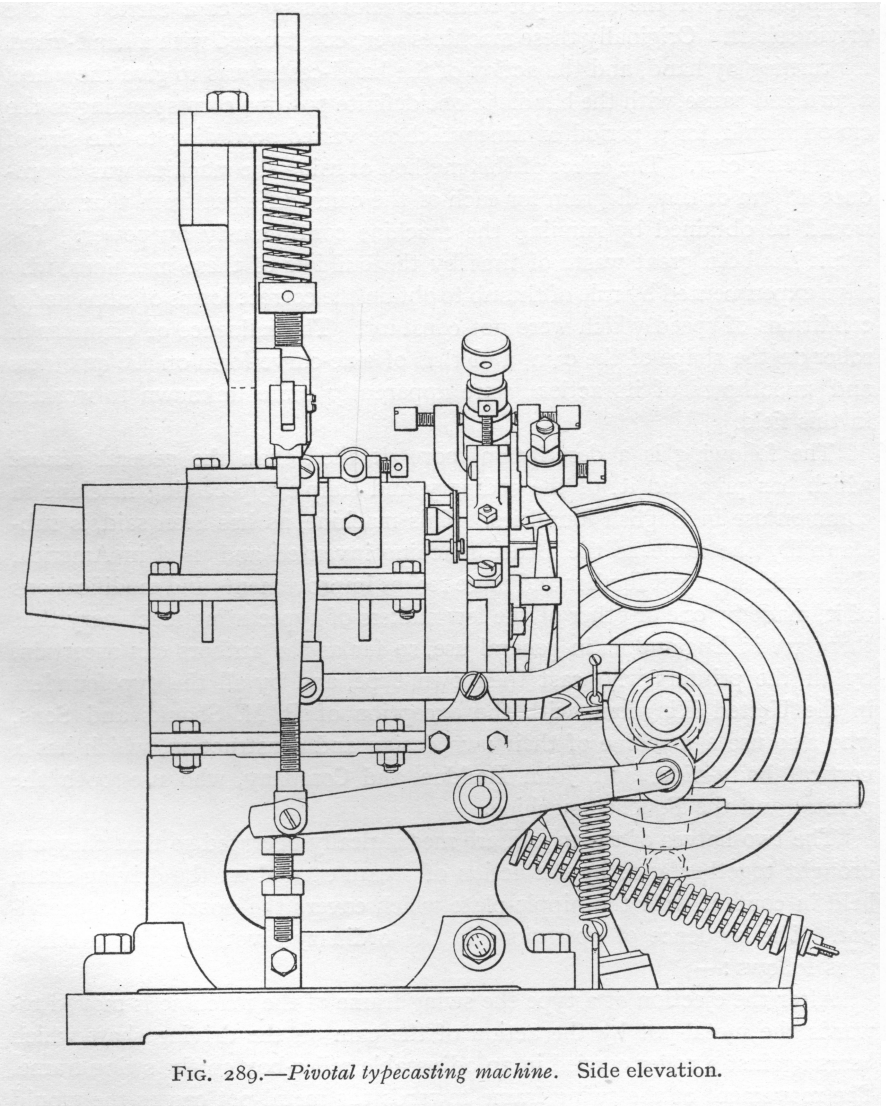


FIG. 289.—*Pivotal typecasting machine.* Side elevation.

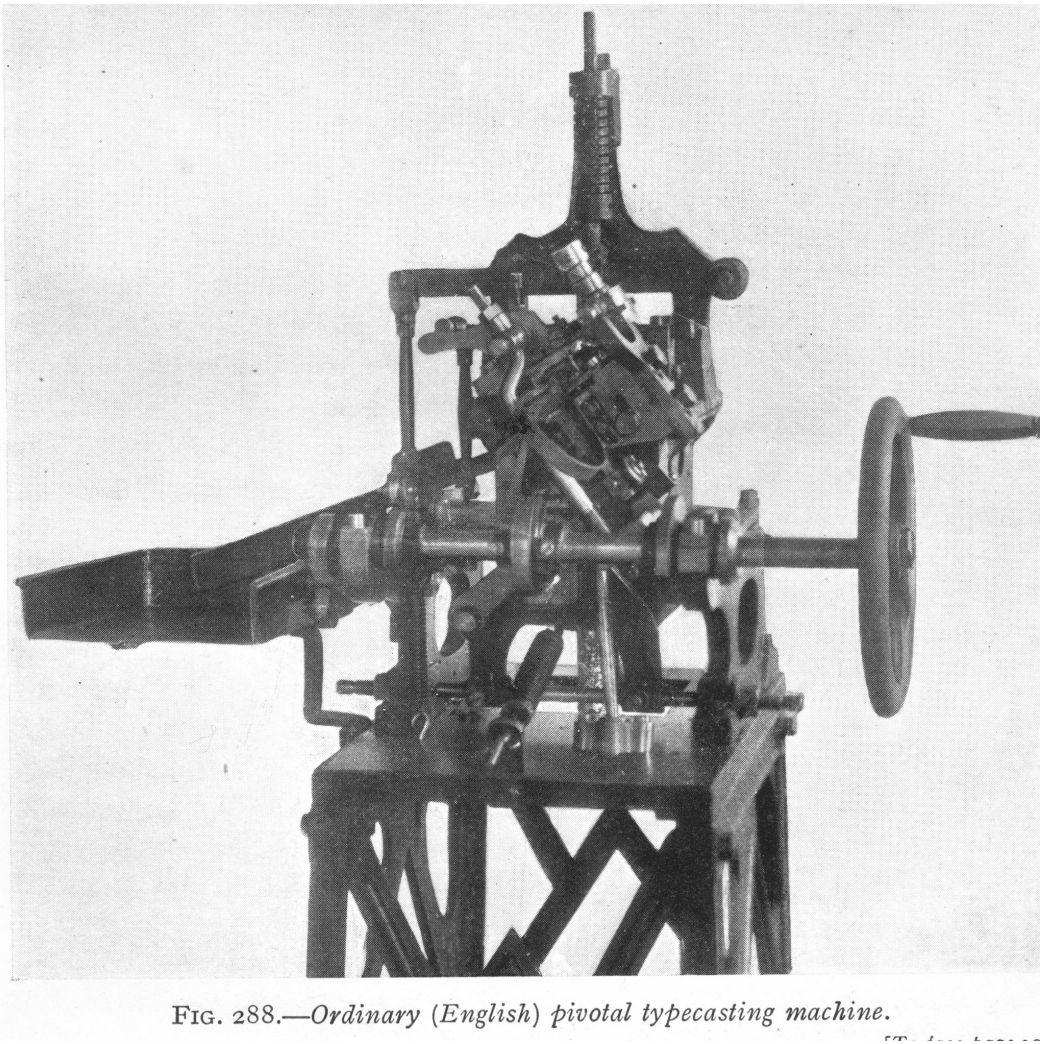
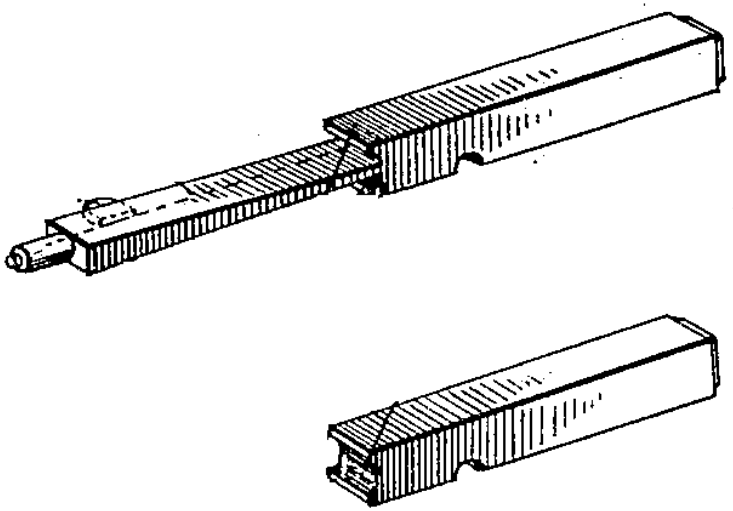


FIG. 288.—*Ordinary (English) pivotal typecasting machine.*

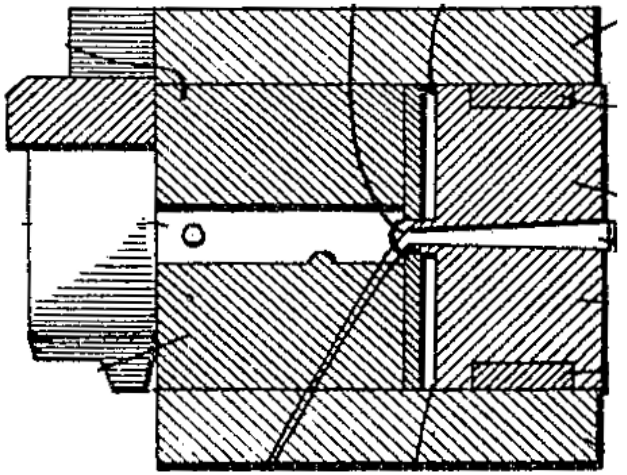
From Legros & Grant

(Their drawing is missing the Ejector Blade behind the mold.)

Patent Jet-Breaking / Foot Groove Mold

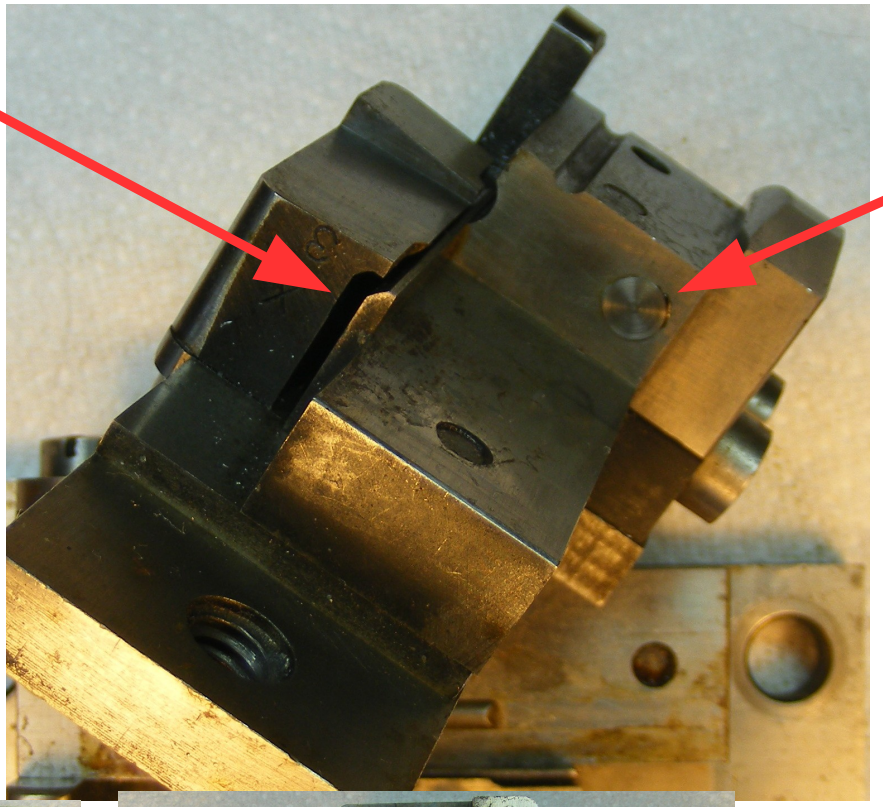


US patent 830,358 (1906)

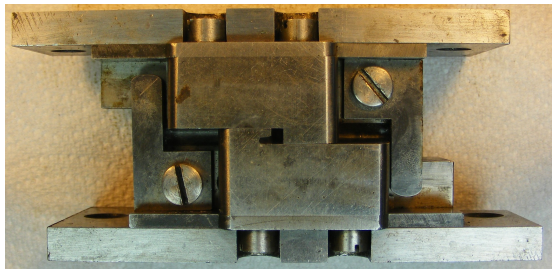


A 36pt Jet-Breaking Mold

"Jet Parts" (PGN term) pushed in when mold locked up to nipple plate



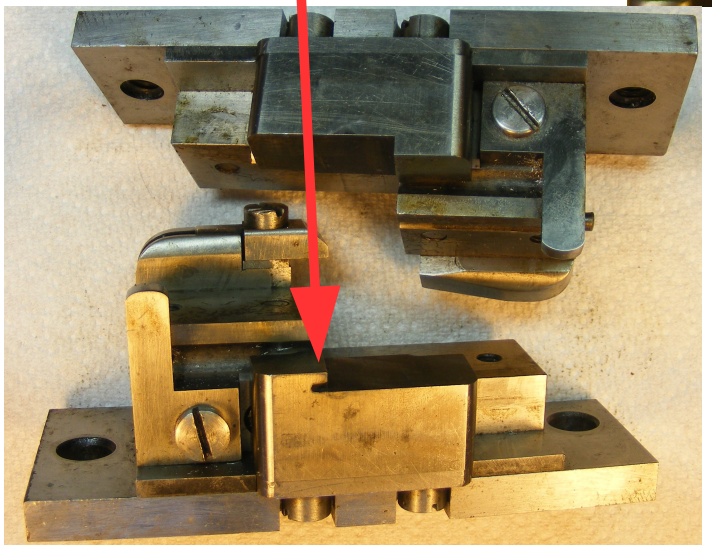
Pin

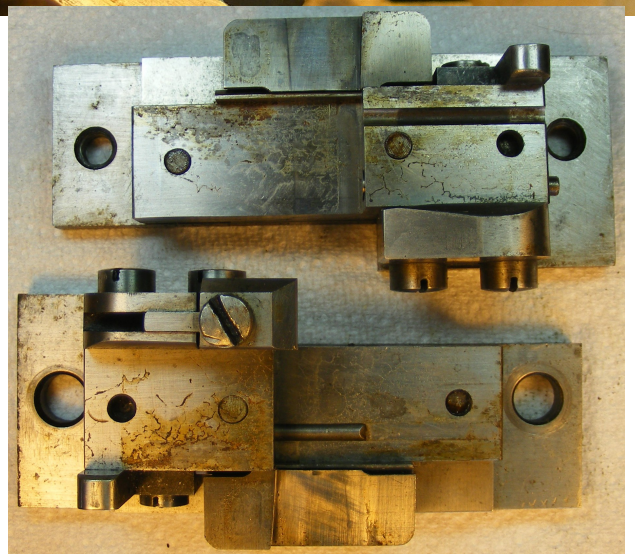


Back (Jet Side)

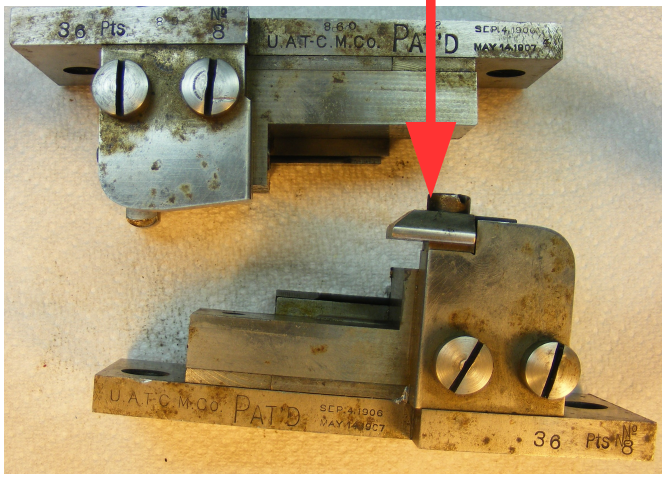
Front (Mat Side)

Cut in lower Jet Part to retain Jet
(is Rettig Sr. patent 354,935 of 1886)

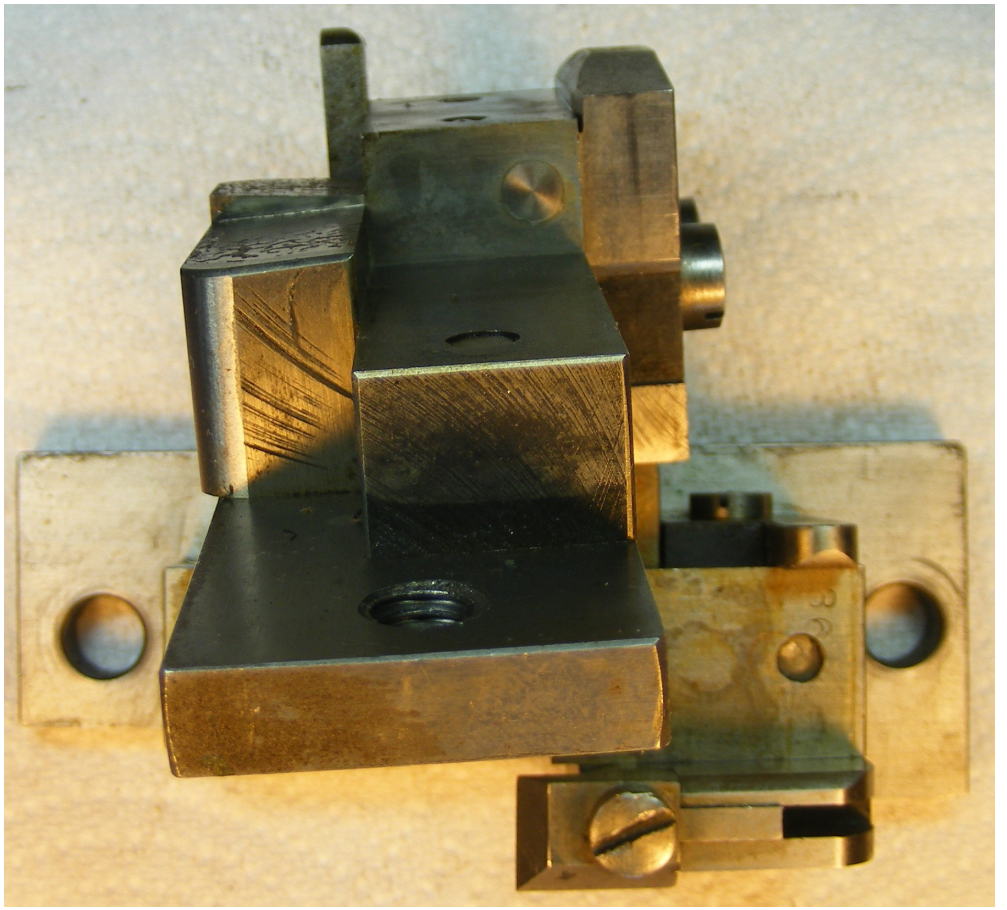


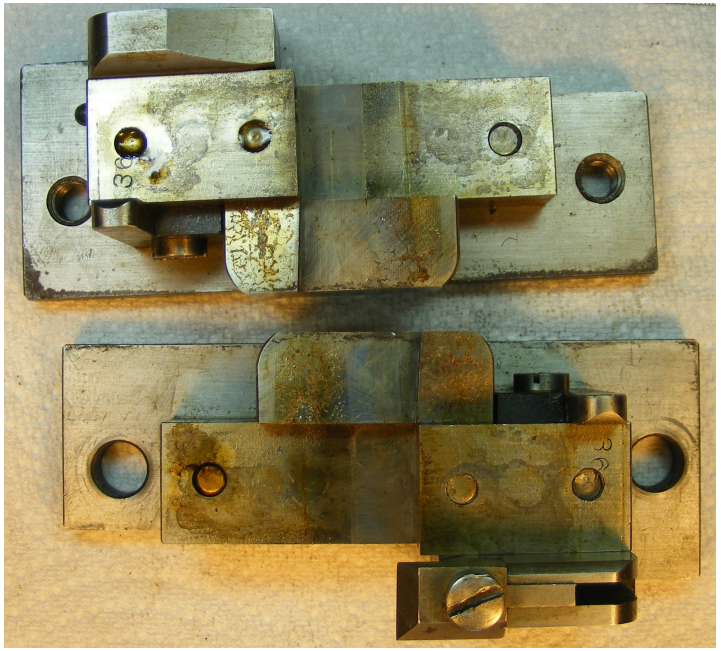


Stool



Conventional Molds Too (36pt Example)

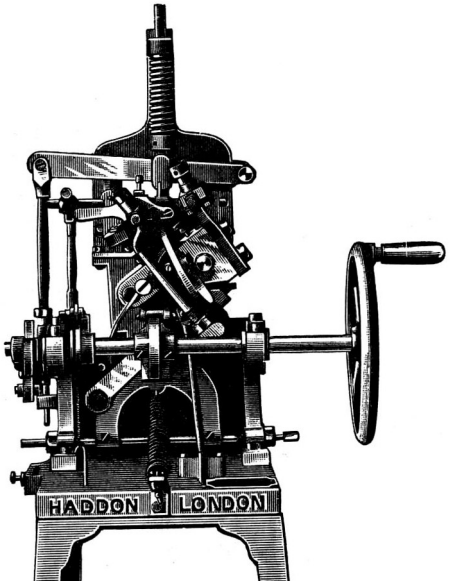




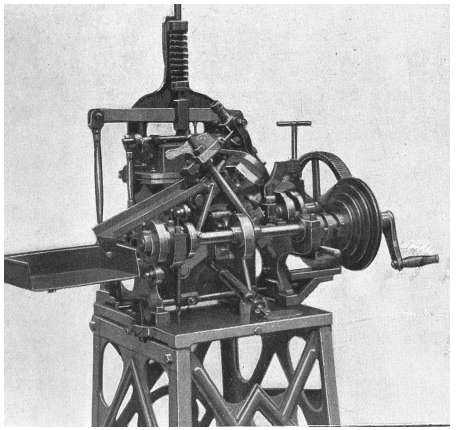
Many “solid jet part” molds are Space & Quad molds, but I'm not sure if they all are. [TO DO: measure drive(s)]

Allowing Large Types to Solidify

(Other Approaches)



Haddon (1891)



Wood, Miles No. 4 (1910)

Barth No. 3 1/2

Thompson

"Dwell" is necessary for casting large types at reasonable rates of speed. The machine must run slowly (or pause) after the cast to allow large types to solidify, but may run more quickly during the rest of the cycle.

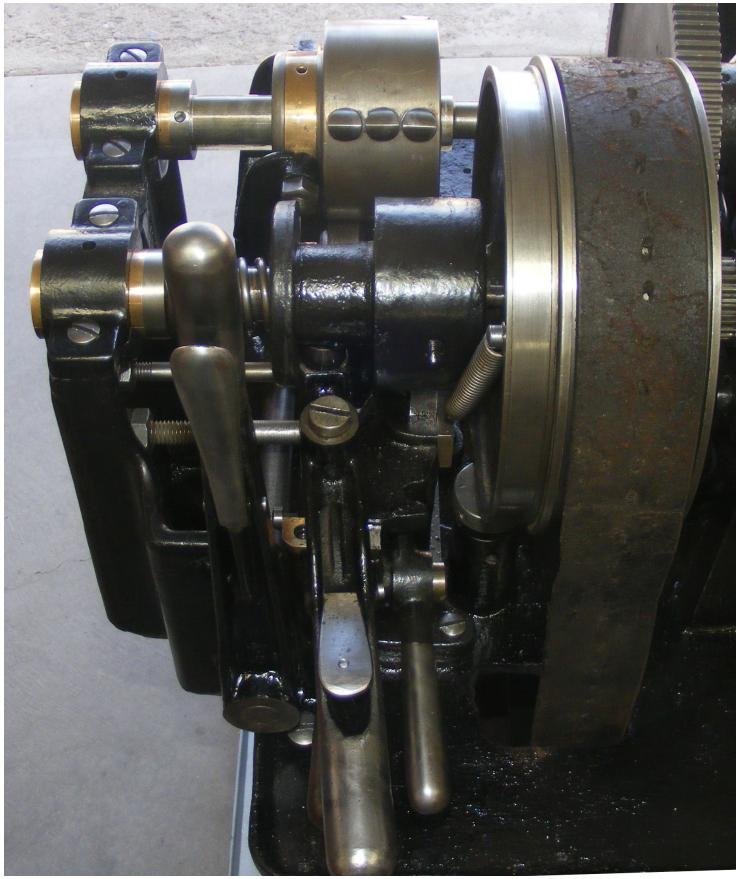
- Done by operator when casting by hand.
- May be provided by interrupted gearing (Wood, Miles No. 4 pivotal).
- Is provided by elliptical gears on the Barth No. 3 1/2.
- Is provided on the Thompson by its Stop Motion.

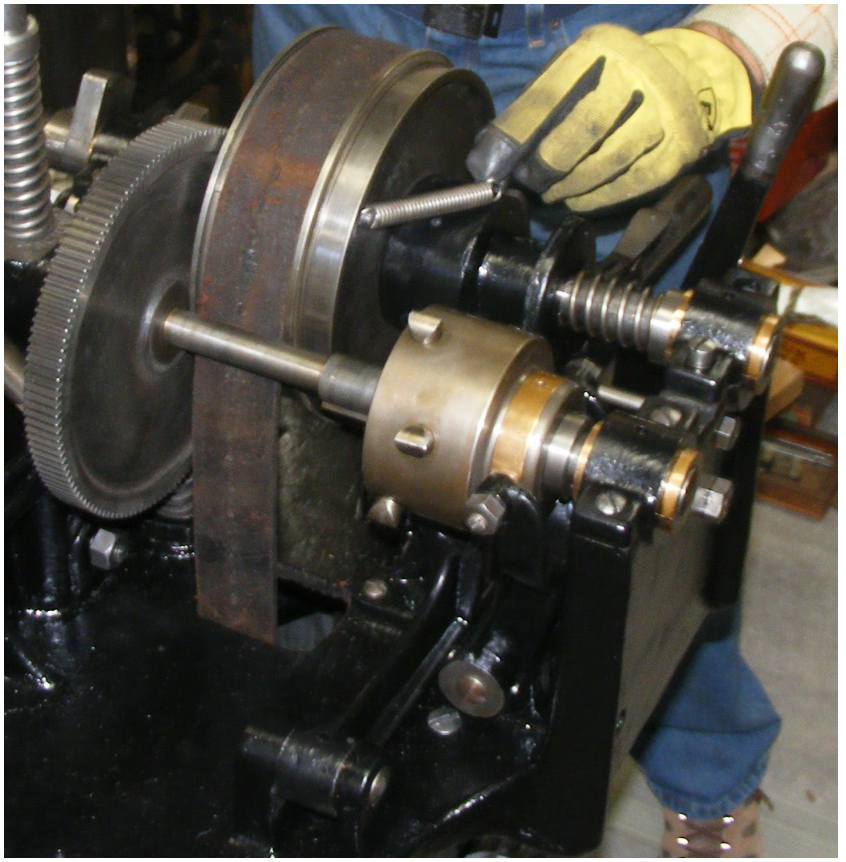
Machines for printers (Thompson, N-R) required a more elaborate mechanism to allow a single machine to run both high speed (for smaller types) and with longer dwell (for larger types).

A printer would probably have only one machine, where a typefounder would be more likely to have several machines over a range of sizes.

Haddon from an ad in *Typo*, v. 5, issue 50 (1891-02-28) at the NZ Electronic Text Collection. CC-BY-SA http://nzetc.victoria.ac.nz/tm/scholarly/Har05Typo-fig-Har05TypoP005b.html
Wood, Miles No. 4 from Legros & Grant, but confirmed by an advertisement supplied by Bob Richardson at the St. Bride Library. Caveat: I don't know for certain that this machine employed interrupted gearing, but L&G use it to illustrate their paragraph which discusses machines which do employ such gearing. Thompson stop motion & Barth No. 3 1/2 elliptical gear photos by DMM.
My thanks to Victor Thibout for pointing out this issue.

Nuernberger-Rettig Stop Motion

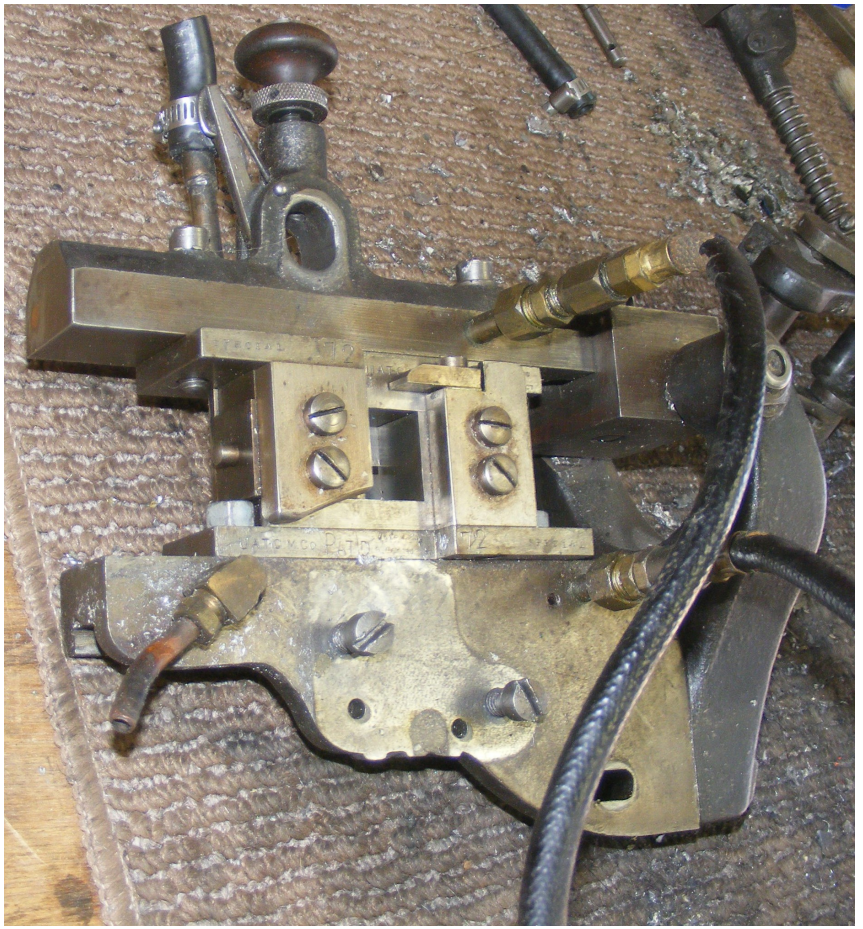




- Unrelated to Thompson “Stop Motion”
- When engaged, it keeps mold closed and against Nipple Plate after casting for 1, 2 1/2, or 5 full revolutions of the driving pulley
- I still can't explain the details of how it works, and I've had the machine apart (but have not run it *under power*). Sky has it figured out.

Water Cooling

- Uncommon on earlier and smaller pivotals, but not unknown
- Wood, Miles pivotals could be fitted, optionally, with an “Air Blast” for cooling.
- Necessary on fixed-mold machines (Foucher, Barth, Thompson, etc.)
    - to keep mold cool enough to allow type to solidify in reasonable time
    - to prevent overheating and drawing the temper of the mold.



(Left) An N-R Mold in its Mold Blocks on the bench at Skyline Type Foundry, showing the connections (and one hose) for water cooling.

(Right) Water cooling on a non-N-R pivotal. At the Dale Guild - an ex-MSJ machine (?)

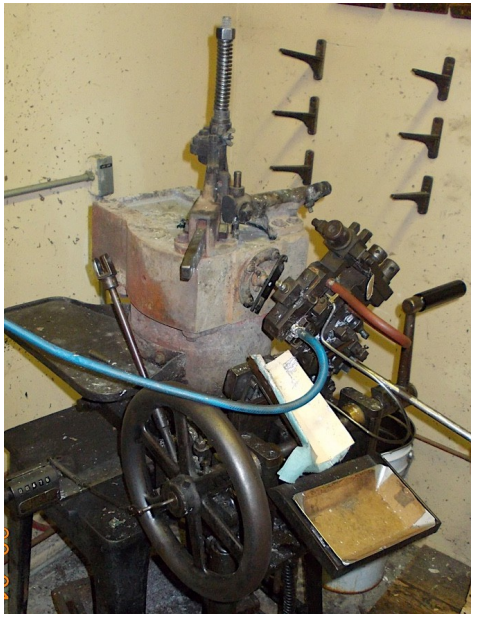
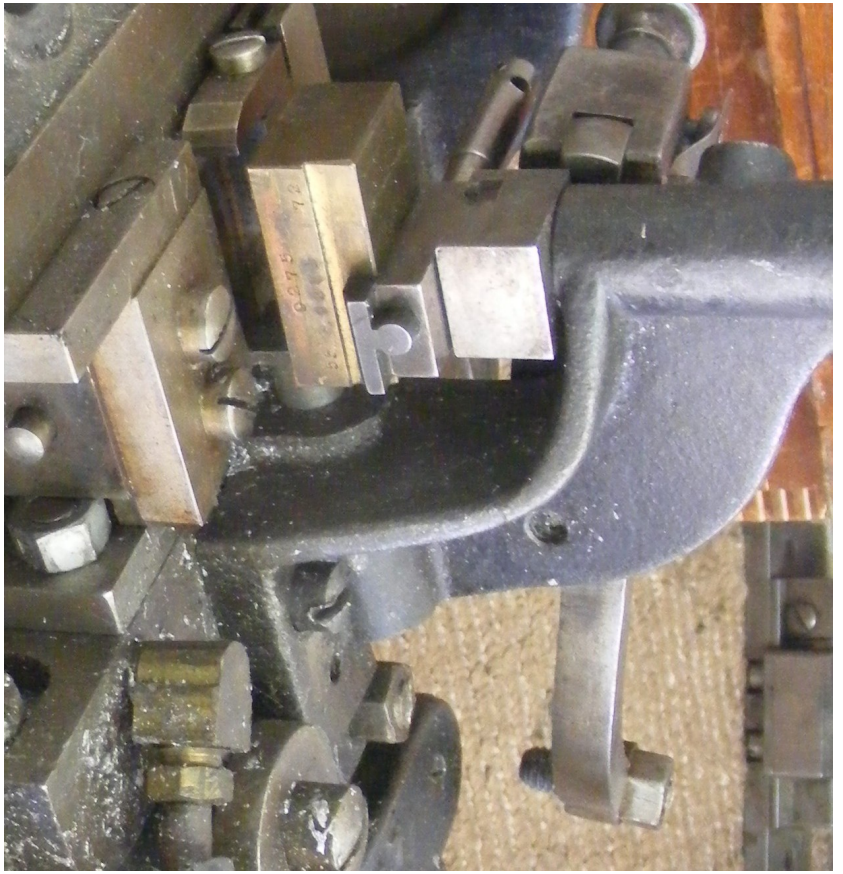


Photo courtesy of Patrick Goossens

Matrix Equipment

A Nuernberger-Rettig
style matrix holder,
with mat, on the bench.
By itself (left) and assembled
to Mold (below).



Part 3: Into the Future

Lineage of Surviving Machines

Five Confirmed

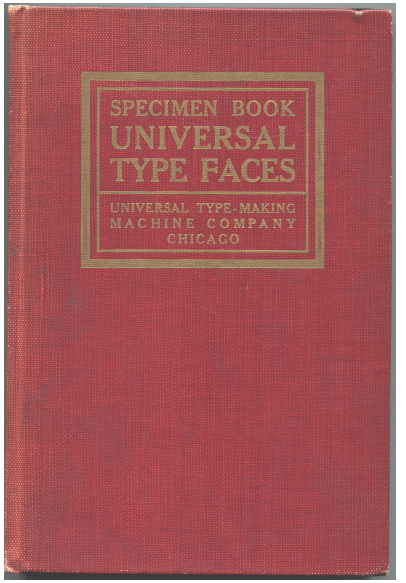
s/n ?	s/n 172	s/n 193	s/n 194	s/n 259
?	?	? Univ. Type-Maker Univ. T-M M Co Chicago	?	? Univ. Type-Caster Univ. T-M M Co NYC
Henry Ford Museum		Sterling T.F. (Michigan)	Sterling T.F. (Michigan)	Baltotype
		Sterling No. 36 (white power switch)	Sterling No. 48 (black power switch)	
	Owen Stout (Paoli, IN)			R. Stanley Nelson
		Sterling T.F. (Indiana)	Sterling T.F. (Indiana)	Roger Frith Bryce McCloud (Isle of Printing, Nashville)
	Gregory Jackson Walters			Skyline T.F. (Illinois)
	(via DMM 2014)	(via DMM 2013)	(via DMM 2013)	
Henry Ford Museum (in storage)	Skyline T. F. (AZ 2014)	Skyline T. F. (AZ 2014)	Skyline T. F. (AZ 2014) (Rebuilt 2016)	Skyline T. F. (AZ 2011)

Surviving Literature

Verified/Available:

Specimen Book of Universal Type Caster Faces Including Borders, Ornaments and Miscellaneous Characters. Chicago: UT-MMC, n.d. (ca. 1914)

- original: Ludlow Typograph Co. -> ? -> Don E. Roseman -> ? -> DCC -> STF (2014)
  Scanned but not yet online - soon, I promise!
- extracts of front matter: photocopy via RSN & STF of Smithsonian (?) copy. Online.



Directions for Operating the Universal Type-Maker. Chicago: UT-MMC, n.d.

- photocopy via RSN & STF of Smithsonian (?) copy. Online.
- includes an illustrated parts list (line drawings)

Listed or Referenced:

The Nuernberger-Rettig Typecasting Machine (1907). Cited w/out data on openlibrary.org

Specimen Book of Type, Borders, Characters, Etc. Cast on the Nuernberger-Rettig Type-Caster. Chicago: UT-MMC, 1911

- Scanned by Google from an unidentified library. Not released for viewing.
- Copy at the Bibliotheek Universiteit, Amsterdam

Specimen Book of Universal Type Caster Faces Including Borders, Ornaments and Miscellaneous Characters. [Chicago]: UT-MMC, 1915.

- Scanned by Google from an unidentified library. Not released for viewing. Google's date of 1915 is likely a guess by the librarian who cataloged it - this is probably the same as the ex-DCC Skyline specimen listed above.
- Also copies at Columbia, Harvard, Newberry, USC

Surviving Matrices

I can't really speak to this. Sky would know more.

With s/n 172 (Stout, Walters, STF)
- I'm not aware of any mats

With s/n 193, 194 (Sterling T.F. / DCC, STF)
- Skyline acquired a good collection of advertising logos, but no matrix fonts

With s/n 259 (Baltotype ... STF)
- I'm not aware of any mats

With Henry Ford Museum machine
- I know nothing

Paul Aken has a handful of mats which are probably N-R (logos only)

Others?

I am presently unaware of any surviving N-R (not Compositype or Linotype) mats which are not logos or spacing mats.

Ghost Survivor?

- Conflicting reports:
  Pat Taylor (Out of Sorts Letter Foundry) had either (or both?)
    - an N-R
    - a “Bruce” pivotal
- This machine was demonstrated at the first ATF conference (1978)
  Referenced as a “Bruce Pivotal Caster” in ATF *Newsletter*, No. 1 (Aug. 1978)
  It would have been sold by him by his downsizing in 1989 (ATF *Newsletter,* No. 13 (Apr. 1990): 1
- Sky spotted a photo of what was *probably* this machine at an ATF conference
  I thought it was in an ATF *Newsletter*, but now I can't find it - frustrating!
- It *may* have gone: Taylor -> Quaker City -> Ben Lieberman -> Theo. Or not.

Where is it now?
- Was it an N-R and s/n 172 (? -> Owen Stout -> GJW -> STF) ?
- Was it the “Puzzle” machine in the next slide?
- Was it scrapped ?
- Is it still out there somewhere ?

A Puzzle

What is it? Where did it come from? What is its relationship to the N-R?

- Shown here at the Dale Guild. Now with PG in Antwerp
- It is <u>not an N-R</u> as shown in any N-R source
- But there's a lot of Nuernberger-Rettig in it

From the flickr photostream of Nick Sherman

From the website of Jason Dewinetz

A still from a flickr video
by TheArm (NYC)

Looking Closer at this Pivotal

Shown at the Dale Guild, with Micah Currier

Features like or identical to an N-R:

- Pot and its mounting
- Nipple Plate and curved mounting
- Plunger, Plunger holder, Spring
- Plunger Arm and its linkage
- Choker Arm and (side) Lever
- Camshaft from Handle to Friction Disk
- Friction Disk
- Type Box and its Stand (shown earlier)

Features not like an N-R

- Drive pulley
- Lack of Stop Motion
- Matrix equipment (shown on next slide)
- Mold Blocks and Yoke (slide after that)

Photo courtesy of Patrick Goossens

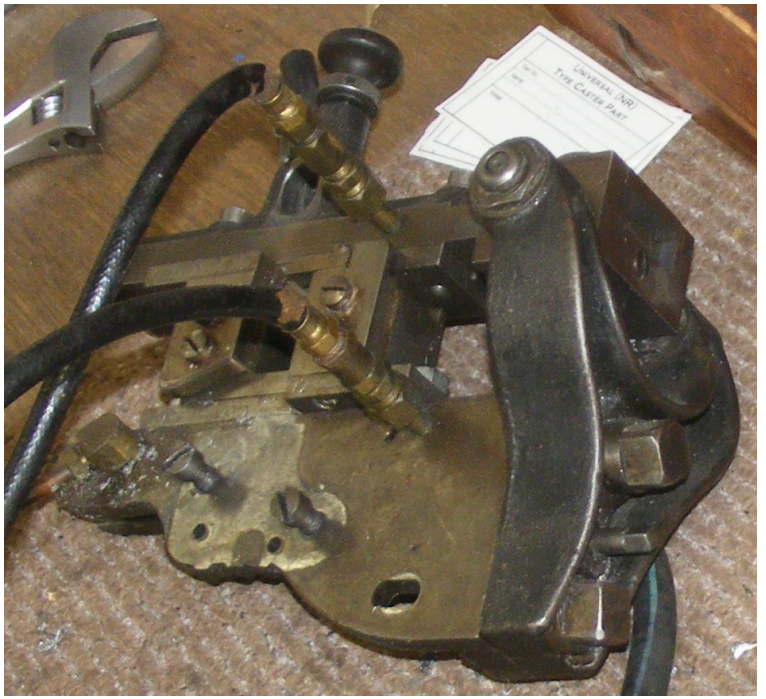
Its Matrix Equipment

Photo courtesy of Patrick Goossens

But the matrix equipment on this machine is purely traditional pivotal, not the Nuernberger-Rettig coil compression spring mechanism

Its Mold Equipment

Photo courtesy of Patrick Goossens



Left: The Mold Block and Yoke on this pivotal
Right: The Mold Block and Yoke on an N-R

They're obviously quite different.

So What Is It ?

- It is not a Nuernberger-Rettig as ever shown in any of their materials
- Without a Stop Motion, it would not meet N-R's market needs
- Patrick's records indicate that this was an ex-Bruce foundry machine
  (which if true would mean it couldn't be N-R, as the Bruce foundry
  was purchased by ATF in 1900 and absorbed into the Central Plant by 1906
  but the N-R didn't appear until 1907)
- It may (or may not) have been the “Bruce” machine owned by Pat Taylor

So (in order of increasing likelihood):

A. It is a caster cobbled together out of N-R parts

B. The N-R was more closely derived than we realize
  from some as-yet-undocumented earlier pivotal
  (of which this is an example)

C. I'm missing something really obvious

(One more topic to go, and then I'd like to come back to this in the Question period.)

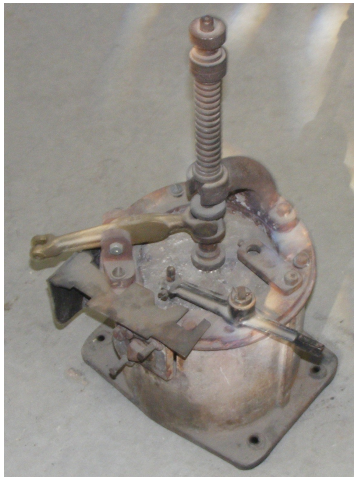
Rebuilding an N-R in 2016

- At Skyline Type Foundry, January 2016
- Approached as a working machine *rebuild*
  (not a restoration or conservation)
- Machine s/n 194 (ex-Sterling)
  (Sterling No. 48, black power switch)
- Machine now turns over by hand.
  Not quite to casting condition
  (choker, motor, water cooling need work)
- Further rebuilds anticipated

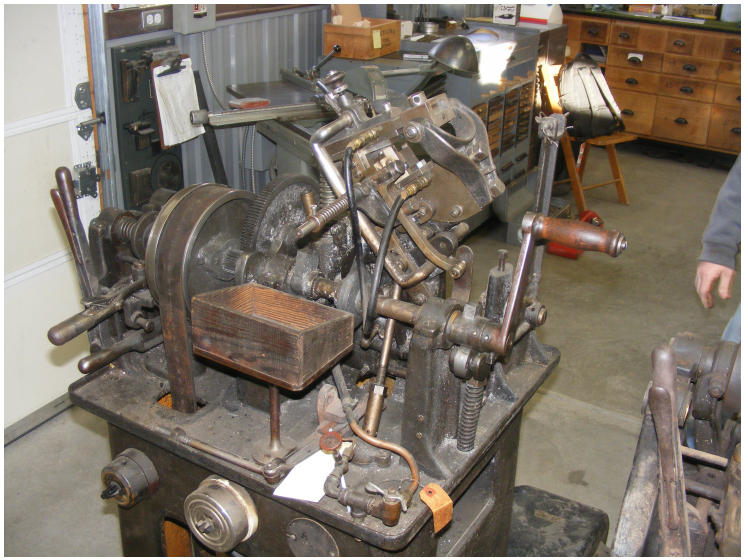
With: Sky Shipley (at right),
Mark Knudsen, Troy Groves, DMM

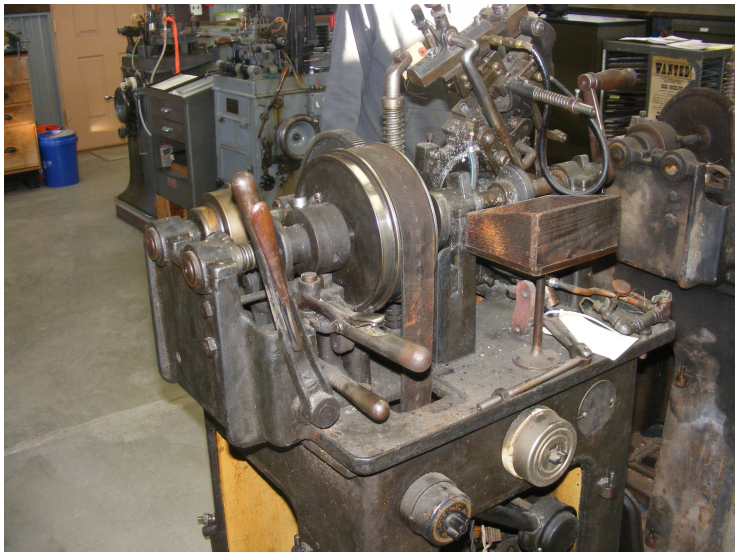
Rebuilding an N-R in 2016

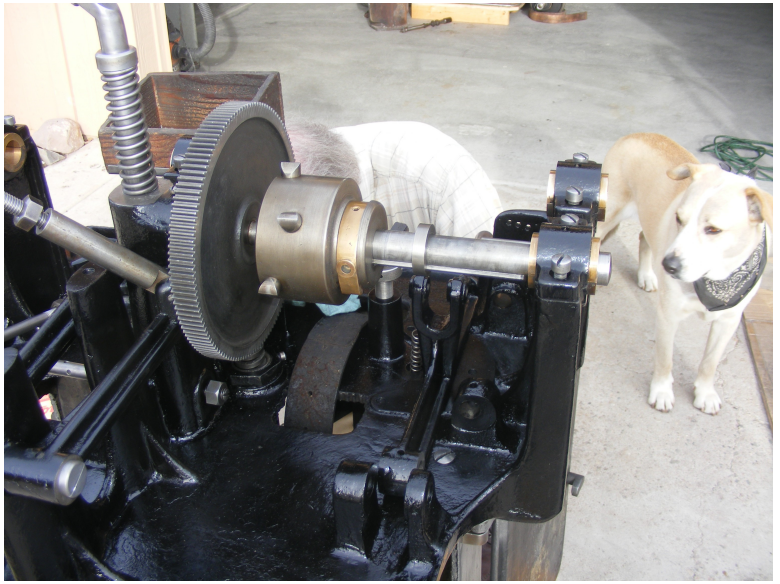
Before: At Sterling T. F. / DCC "Boutique," 2010.
All other photos at Skyline T. F. 2016

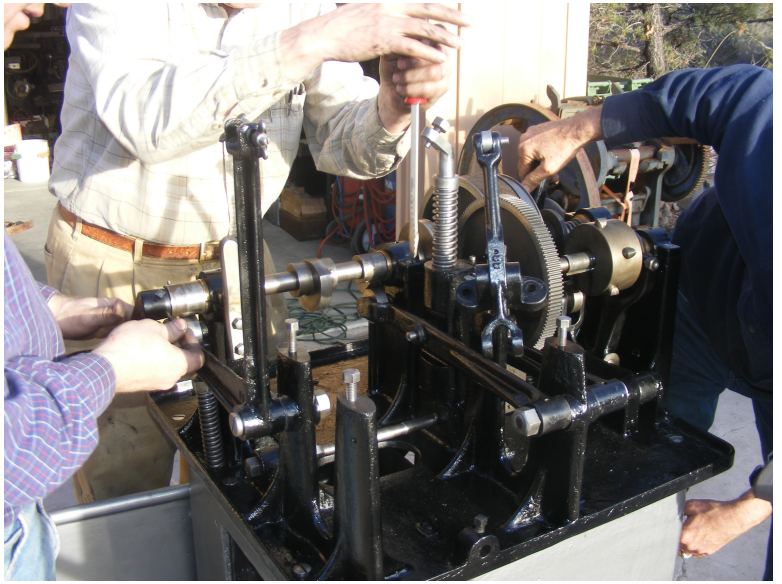


Rebuilding an N-R in 2016









Write It Down!

Most of the oral history of the Nuernberger-Rettig is sitting in this room today. If we don't save this information, it will be lost. Yes, the next generation *is* interested in this - not everyone, but enough to matter.

If there's something I don't have here, assume that I do not know it.

Write it down and I'll be happy to include it.

Or tell me and I'll be happy to write it down for you.

Qestions?

This presentation is online at:
CircuitousRoot.com/artifice/letters/press/noncomptype/casters/nuernberger-rettig/index.html

Note: This maker's plate, which has no s/n, came from s/n 193 (Sterling No. 36) and is now on s/n 194 (Sterling No. 48) as rebuilt by STF.